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LATISSIMUS

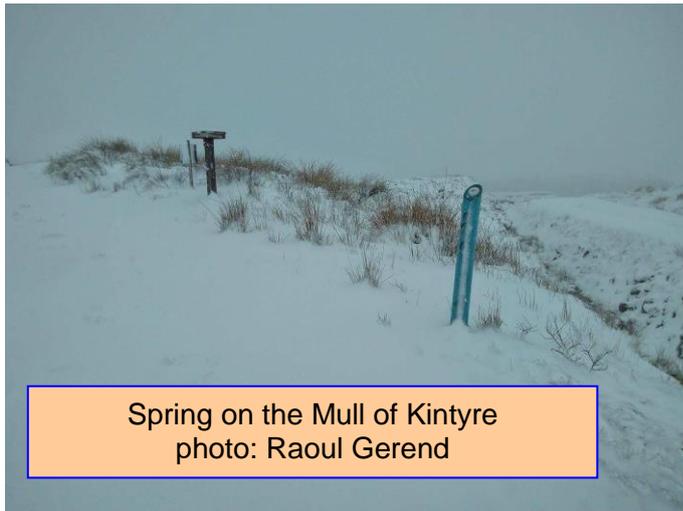
NEWSLETTER OF THE
BALFOUR-BROWNE CLUB



Number Forty One

May 2018

Hydaticus (Prodaticus) kepemangoyei is one of the latest species described by Armando Bilardo and Saverio Rocchi from Gabon (see page 30). It resembles *H. matruelis* Clark and *H. arcuatus* Régimbart



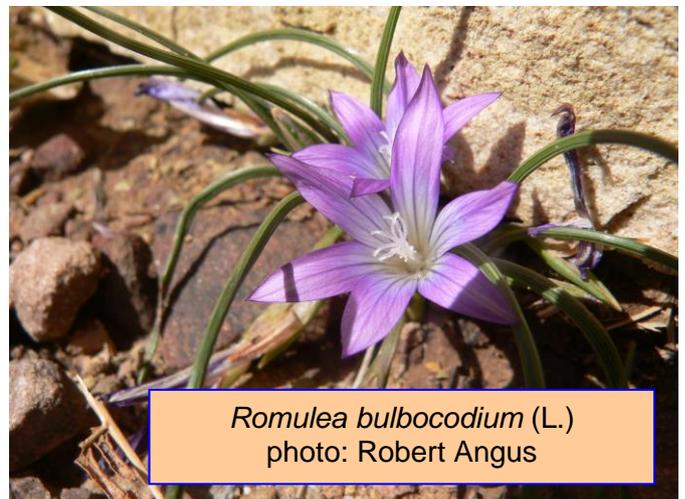
Spring on the Mull of Kintyre
photo: Raoul Gerend

MOROCCO 2018

The meeting was set to coincide with the Luxembourg school holidays so it was fun to see that snow had arrived at Campbeltown in time for Raoul's walking trip there. Given the wet and prolonged winter it was no surprise that Morocco appeared so verdant from the plane, and that there were even glimpses of snow. On Friday 30 March and after arriving at the Chems Hotel, Tétouan, four of us met with the main organiser, Nard Bennis, who escorted us to get money and to visit a

restaurant. First contact with Moroccan traffic was, as expected, "educational" with dramatic near-misses merely reflecting the skills of the local drivers. Ten-point status was initially awarded to a driver on his mobile whilst reversing into the main road but he was soon bested by a motorcyclist towing a roller skater. Out of town a trip to Ichtal proved much easier, especially when one realised that bends in the road genuinely provide overtaking opportunities, and that continuous white lines mean nothing.

A tradition of Club meetings is the need for someone or something to get lost. We achieved this in style in our splendid trip to the Rif in North Morocco. Nard had invited the first contingent for dinner at her house,



Romulea bulbocodium (L.)
photo: Robert Angus



One of two tables at Nard's home
photo: Kamal Tarquisti

which was apparently on the same road as the hotel. Nevertheless I succeeded in getting us lost in the traffic behind our lead vehicle and we eventually stopped, pointing uphill and reluctant to telephone yet again. Hunger became so severe by 10 p.m. that we had a joint hallucination: coming towards us down the hill and bearing a flat box was a well-proportioned gentleman. "It's Robert with an emergency pizza". But the resemblance fizzled out as the man got near. Eventually Nard's son rescued us, even to the extent of parking the car. We were then treated to a remarkable meal in the rich tradition of Morocco.

ADDRESSES The addresses of authors of articles and reviewed works are mainly given at the end of this issue of *Latissimus*. The address for other correspondence is: Professor G N Foster, 3 Eglinton Terrace, Ayr KA7 1JJ, Scotland, UK – latissimus/at/btinternet.com

The following morning most of the 20 participants were in place, with representatives of Britain, Finland (Wenfei Liao OK, also China), France, and the Netherlands, the Spaniards being significantly delayed by Customs, and we formed another convoy to visit the Bou Hachem Natural Park. We formed up in three groups, one caused by me going slowly, and it turned out that we all got lost in the woods. However, we all arrived at interesting shallow pools, one possibly based on a peat bog. One pool seemed to have acted as a trap, with many species in ones and twos, including *Hydrophilus pistaceus* and what is now *Limnohydrobius convexus* (Brullé). This was our warmest day in the hills, getting to 21°, and it allowed Matt Smith [right] to demonstrate how one can light a cigarette using a hand lens. We had been well supplied with fruit and nuts to tide us over for the al fresco lunch outside a local hostel, admiring the gorgeous view and feeding the cats. It was at this point that Will Watson rang the changes on mint tea by using different



vegetation. "That's wormwood" we said, and indeed Will had his first experience of a kind of Absinthe. Everyone decamped to The Blue City of Chefchaouen, mainly to the Parador,



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which boasted a bar carrying a few beers. Experiencing Heineken again might well explain why some give up

alcohol. We did our own thing that night, and the following day a large pool near Bab-Berred provided a classic Club location, where we could space ourselves out along the bank, compare captures, swap places and generally frustrate each other trying to find what someone else had just found. This was probably the largest list for the trip, and the best for my collection, with my 60th *Helophorus, oxygonus* Bedel. The site was close to a genuine *locus classicus*, for Michael Manuël's *Hydroporus rifescens*, a species closely related to *H. gyllenhalii* Schiödte. Here we also first encountered another Rif endemic, *Hydrochus*,



Taktoka Jabaliya
photo: Kamal Tarquisti

Will in action.
photo: Sue Foster

Really a salad. photo:
Barend van Maanen

obtusicollis Fairmaire, a species with an unfortunate history. In 1994 Arno van Berge Henegouwen indicated its existence in his presentation to the Club in Barcelona but could not locate any type material. The beetle's status was reviewed by Nard *et al.* (2007) but the Palaeartic Catalogue (Löbl & Löbl (eds) 2015) continues to have it as a synonym of *H. flavipennis* Küster, a smaller species which was present with it in the Rif. Nard had arranged a visit that night to a beautifully decorated house for the Gala Dinner complete with *Taktoka Jabaliya*, four musicians entertaining us with local music fun all the way. We were first welcomed by Abdilah Tazi, President of ATED (Association Talassemrane Environment Development). The main dishes of the Gala Dinner were a decorative salad, huge pastilles, which were sweet and savoury pies with pigeon (or perhaps chicken) and almonds, followed by a main course of goat. The first course had converted Wenfei to salads after having hated the Finnish version.....

摩洛哥的食物不像芬兰菜只是为了填饱肚子而存在。作为一个来自芬兰的中国人，我毫不犹豫地大肆赞扬摩洛哥食物。之前我对“沙拉”充满了厌恶，因为芬兰沙拉吃起来如同嚼草，但摩洛哥沙拉不一样，味道丰富，可与我做的凉拌黄瓜媲美

Absinthe perhaps still having an effect Will participated in Taktoka Jabalia's performance with such increasing gusto that he was asked to join the group and to share their clothing and instruments.

Unlike most other Club Dinners there were no hangovers the following morning. A fleet



Landrovers in the National Park.
photo: Kamal Tarquisti

of white Landrovers had been assembled for us the next day to go into the Talassemrane National Park. Thus we had the beetling epitome of British production, the Landrover and the EFE-GB Net deployed in one enterprise. Our nets served two purposes, initially biosecurity as they were brand new, and secondly and more importantly as gifts to Nard. We started at the forestry base in Talassemrane where we could view the main reason for the Park, the Atlas Cedar (*Cedrus atlantica* (Endl.)) in an introductory talk by

Youssef Benhiba, Director of the National Park. One of the other special species showed up too – the Barbary Macaque (*Macaca sylvanus* (L.)). Natural forest is in decline, one reason being that it is possible to burn down sections and replant with marijuana, which we witnessed in our stimulating drive through the forest. Our main beetling stop was at an open area of seepages and watering holes next to a picnic site. *Helophorus* was the main interest, as it so often is in mountain systems in the spring, but oddly in combination with *Yola bicarinata* (Latreille), *Aulacochthebius exaratus* (Mulsant) and other species more usual on low ground. The tiniest *Helophorus* raised hopes of a new species, but turned out to be *H. gratus* Angus, one we should have known from earlier encounters in Spain and Portugal. At the end of the day, and it was getting darker, Nard specified the “short cut”, which started by going up to 1,800 metres into the falling adiabatic cloud. Emerging from the murk after not too long we saw Chefchaouen twinkling deep below us. We noted our driver's pleasure in making it back to the main road, plunging into the sparkling city. An early night for some

Nard presented with her second GB-net by Robert Angus



and down in the souk for others. At breakfast in the Parador Will realised that he had left his sample of beetles high in the mountains. No problem! Enter the Spanish Mammal Group. They went up two days later, found his specimens and gave them to Andres Millán for postage in Europe.

We travelled to the coast but drew a blank in searching for rockpools. At Azila the first productive site was roadside ditches full of freshwater vegetation, tadpole shrimps (*Triops cancriformis* (L.)), clam shrimps (Conchostraca) and fairy shrimps (*Cheirocephalus*). We then backtracked to some marshes we had spotted further north near Houara, this time strongly saline and with our first green *Berosus*. These marshes were species-rich and highly entertaining but here the meeting ended with the presentation to Nard of the second of her GB-nets by Robert. We then split up, by which time I had been relegated to “second driver” - so

it was almost relaxing to watch Matt tackle the Tangiers rush-hour. Our plane schedule to Edinburgh dictated an extra day, which we spent looking across the Straits of Gibraltar in what was almost a gale. We used our hotel's Buggies (bottom right, with Pierre) to look for ponds: their drivers tried to impress us by falling off a cliff but we'd done that already in Landrovers!

There is still a lot to be done before Nard can expect complete lists from us. We left the hotel apartment to Pierre Queney, flying out later in the day: he must have appreciated the chance to relax after five days in the back of a car driven by the English. At least Pierre then had the uninterrupted time to arrange his beetles in his strange little boxes.

It was a privilege to meet so many pleasant and generous people, and to be looked after so well by Nard, her family and friends.



Pierre Queney in a Buggy

BENNAS N, ABELLÁN P, SÁNCHEZ-FERNÁNDEZ D & MILLÁN A 2007. *Hydrochus* cf. *obtusicollis* Fairmaire, 1877 (Coleoptera, Hydrochidae), un coléoptère aquatique du Rif marocain hautement menacé. *Boletín Sociedad Entomológica Aragonesa* **40** 491-495.

LÖBL I & LÖBL D (eds) 2015. *Catalogue of Palaearctic Coleoptera. Volume 2/1. Hydrophiloidea-Staphylinoidea*. Leiden: Brill.

MANUEL M 2014. A new species of the genus *Hydroporus* Clairville, 1806 from the Central Rif mountains of northern Morocco (Coleoptera: Dytiscidae). *Zootaxa* **3841** 90-106.

GNF

THIRTY FIVE YEARS OF *HYDROPORUS SCALESIANUS* STEPHENS IN CUMBRIA

David T Bilton & Steven D Routledge

Hydroporus scalesianus is generally considered a relict species in Britain and Ireland, where it is restricted to primary fen and bog habitats (Foster *et al.* 2016). In Britain, the species is extremely localised, with only five recent sites known outside East Anglia, all of which are small, isolated areas of natural wetland. *H. scalesianus* is much more widespread in Britain as a Holocene subfossil, however, its present relictual distribution apparently resulting from wetland loss associated with agriculture.

Biglands Bog SSSI (NY259537) is a small (10.5 ha) valley wetland formed in glacial drift on the Solway Plain to the west of Carlisle. The site is dominated by what is now rather dry eutrophic fen, but retains a central wet core with *Sphagnum* mosses, possibly due to groundwater input, surrounded by small areas of mossy transition mire. *H. scalesianus* was first found at Biglands by DTB in 1983 (Bilton 1984), being refound (again by DTB) in 1985 and 2000. In the 1980s the species was abundant across much of the site, in both eutrophic fen and transition mire, but by 2000 it was restricted to small areas of transition mire in the centre of the bog, which appear to receive groundwater input. On 29 April 2018, we visited Biglands and found one specimen in the same area where the species



DTB in the area where *Hydroporus scalesianus* was found
photo: Steven Routledge

was last observed in 2000 (see below), no other specimens being found despite us spending just over two hours sampling elsewhere across the site. As early as the 1970s Ratcliffe (1977) noted that agricultural eutrophication had led to the loss of the 'brown mosses' observed at Biglands in the 1950s. Agricultural eutrophication and siltation have continued apace since the 1980s, much of what was treacherous wet fen in 1983-5 now being relatively solid ground with extensive nettle growth. Despite this, *H. scalesianus* persists at what remains its only site in north-west England, albeit as a highly vulnerable population, apparently much reduced in both size and extent.

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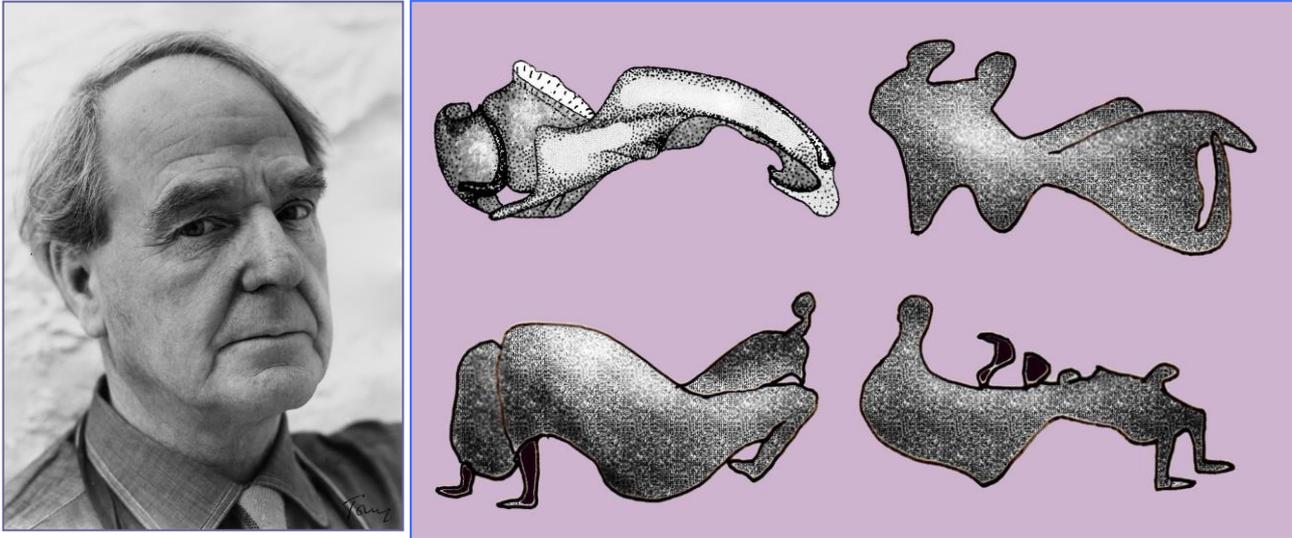
BILTON DT 1984. Four water beetles new to Cumberland, including *Hydroporus scalesianus* Stephens. *Entomologists' Monthly Magazine* **120** 251.

FOSTER GN, BILTON DT & NELSON BH 2016. *Atlas of the Predaceous Aquatic Beetles (Hydradephaga) of Britain and Ireland*. Field Studies Council.

RATCLIFFE D (ed.) 1977. *A Nature Conservation Review. Volume 2 Site Accounts*. Cambridge University Press.

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HENRY MOORE INSPIRED BY HYDRAENA?



Some “silhouettes” by Sir Henry Moore (1898-1986) can be found on the web (redrawn here to avoid copyright issues). They suggest that the sculptor was inspired by *Hydraena* aedeagophores. Surely *cata* d’Orchymont is more interesting?

ICE-HOLES LOSSES IN DYTISCIDAE

Although the phenomenon described here was depicted in *Latissimus* 40, p, 25, a whole paper on offer *Latissimus* got overlooked in the chaos usually associated with producing final copy. Fish traps (in Russian, koshura) made of willow are set in the ice in Lipetsk Oblast to catch European weather loach, *Misgurnus fossilis* (L.). These traps also catch mammals and insects, including many water beetles, which the fishermen may discard on the ice. This provided some large catches in which to assess the prevalence of female morphs. Reticulate females dominated by an order of magnitude over smooth females in the *Cybister*, and these reticulate forms are proposed as facilitating the expansion of *lateralimarginalis* northwards.

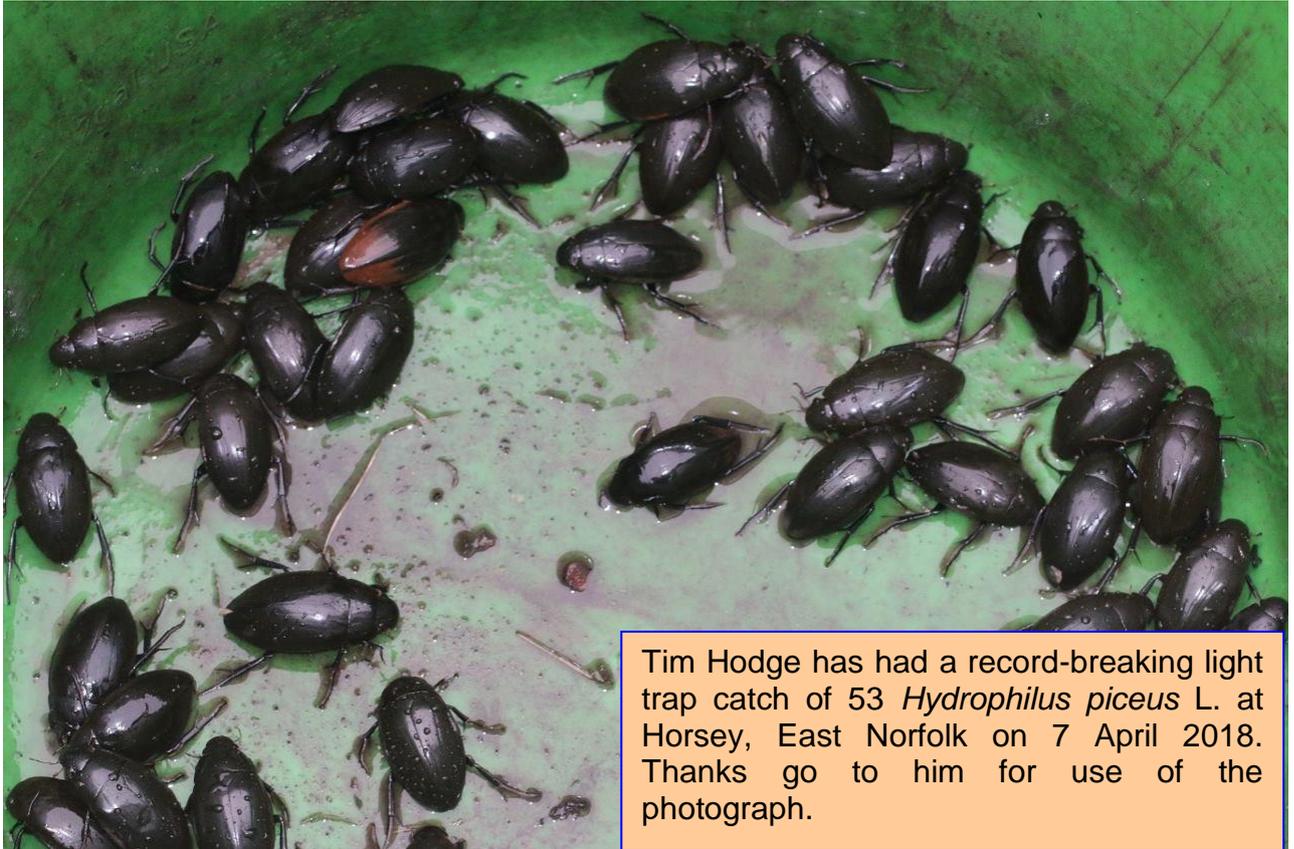
PROKIN AA, ZEMLYANUKHIN AI & SELEZNEV DG. 2018. Damage to diving beetles (Dytiscidae) from willow traps in Lipetsk oblast (Russia) and features of *Cybister lateralimarginalis* and *Dytiscus circumcinctus* populations in winter. *Russian Entomological Journal* 27 11-14.

DOMINICAN COPELATUS

Twenty-two taxa of *Copelatus* are known from the Antilles, 15 of them being endemic including the newly described *martini* from Hispaniola. Most *Copelatus* are well known not only for their strongly inscribed elytral striae but also for the variation in them, and this study has some striking examples. Two species vary in the number of striae from one area to another. *C. vitraci* Legros shows variation in that females may have one or two striae additional to those seen in associated males. Predictions are made about what the molecular phylogeny might show, species with 11 striae being ancestral to those with 10, and species with 6 striae plus a submarginal one being derived from the species with 10 striae.

MANUEL M, DELER-HERNÁNDEZ A, MEGNA Y S & HÁJEK J 2018. *Copelatus* Erichson from the Dominican Republic, with the description of a new species, comments on elytral striation and faunistic notes on Antillean species (Coleoptera: Dytiscidae: Copelatinae). *Zootaxa* 4399 371-385.

HYDROPHILUS IN ABUNDANCE IN NORFOLK



Tim Hodge has had a record-breaking light trap catch of 53 *Hydrophilus piceus* L. at Horsey, East Norfolk on 7 April 2018. Thanks go to him for use of the photograph.

THREE NEW BORNEAN ELMIDS

Given that citizen scientists were mentioned in the title, the sub-editor went for “Groovy beetles” as a title but this was rejected. This is the first record of any *Grouvellinus* from Borneo, let alone three new species. It might also have been “Titanic beetles” on the basis that one species is named *leonardodicaprioi* in honour of the film actor’s contributions to environmental awareness. The most frequent of the new species is named after the Dutch astronaut André Kuipers.

FREITAG H, PANGANTIHON C V & NJUNJIĆ I 2018. Three new species of *Grouvellinus* Champion, 1923 from Maliau Basin, Sabah, Borneo, discovered by citizen scientists during the first Taxon Expedition (Insecta, Coleoptera, Elmidae). *ZooKeys* 754 1-21.

SAINT HELENA ELMID EXTINCT?

The HMS Beagle came to St Helena in July 1836, when Charles Darwin visited Saint Helena and found two specimens of the only water beetle known from the island. These resided in Charles Waterhouse’s collection until Charles’s son Frederick described them as *Elmis brunneus*. Thus they escaped the attention of Vernon Wollaston, not getting a mention in his 1877 review of the island’s Coleoptera. The species was transferred to the primarily South African *Peloriolus* Delève. It would appear that this species has gone extinct as Howard Mendel could not find it in a survey in 2017, when he noted the plethora of topmouth gudgeons, presumably introduced to control mosquitoes and only too effective at eliminating other invertebrates.

WATERHOUSE F H 1879. Descriptions of new Coleoptera of geographical interest, collected by Charles Darwin, Esq. *Journal of the Linnean Society (Zoology)* 14 530-534.

STRIDULATION IN SOME DYTISCIDAE

Jack Greenhalgh

Water beetles have long been known to produce a variety of sounds by stridulating - a process in which two hard body parts are rubbed together. Due to recent advances in technology, the field of bioacoustics (the study of sound produced by or influencing biota) is growing rapidly and rekindling a need to understand biological sound.

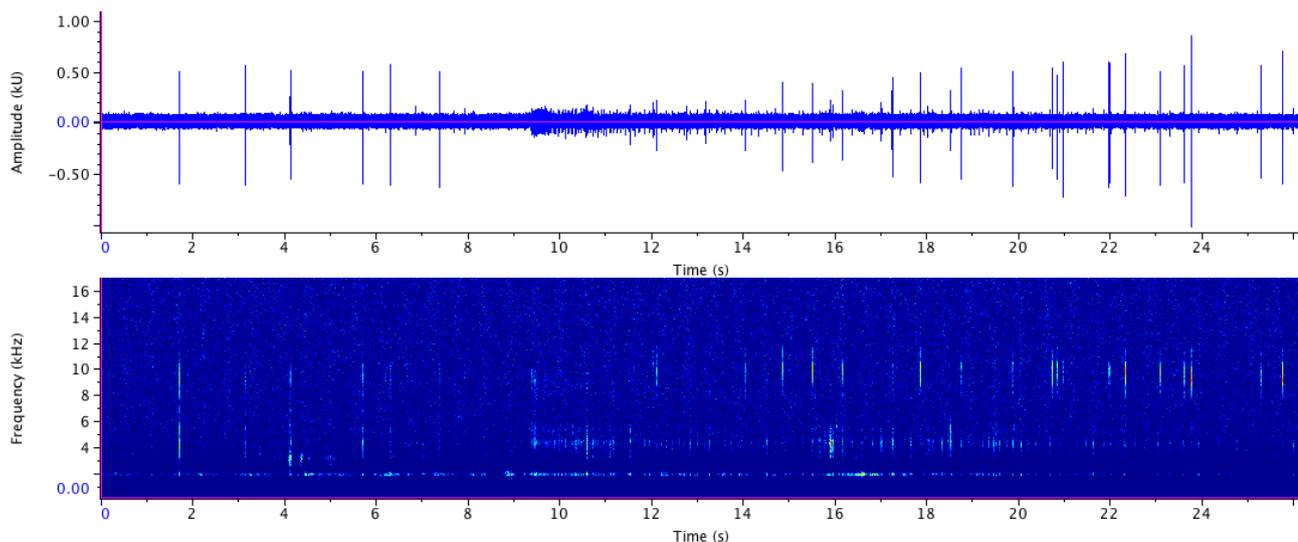
Bioacoustics has the potential to revolutionise the way that Dytiscidae and other taxa are surveyed by offering a less intrusive and more cost effective surveying technique. Once a reference library of species specific recordings has been established, advances in machine learning and solar-powered automated acoustic recorders will allow for real-time detection of species, thus, leading to improved assessments of aquatic habitats.

It was my suspicion that water beetles produce species specific sounds. Last summer I recorded the stridulations of three water beetles (Dytiscidae): *Acilius sulcatus* L., (*Hyphydrus ovatus* L. and *Rhantus suturalis* (Macleay)). The beetles were sampled from farm ponds located in Bodham and Melton Constable, East Norfolk in late July.

Once collected, individuals were transferred into a field tank and allowed to acclimatise for a five minute period. After which, audio recordings were made with a Jez Riley French hydrophone (standard) onto a Tascam DR-70D with a Sound Devices Mix-Pre as a mixer. The beetles were then preserved on-site in 90% IMS and later identified in the lab.

[The frequency charts are best viewed on line. Ed.]

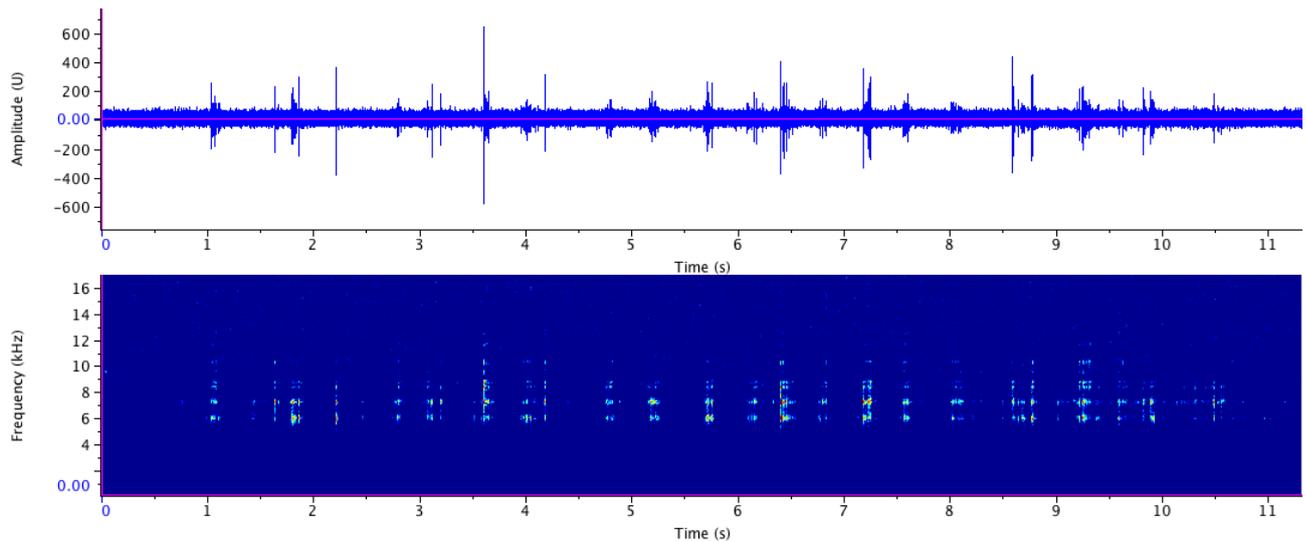
Acilius sulcatus



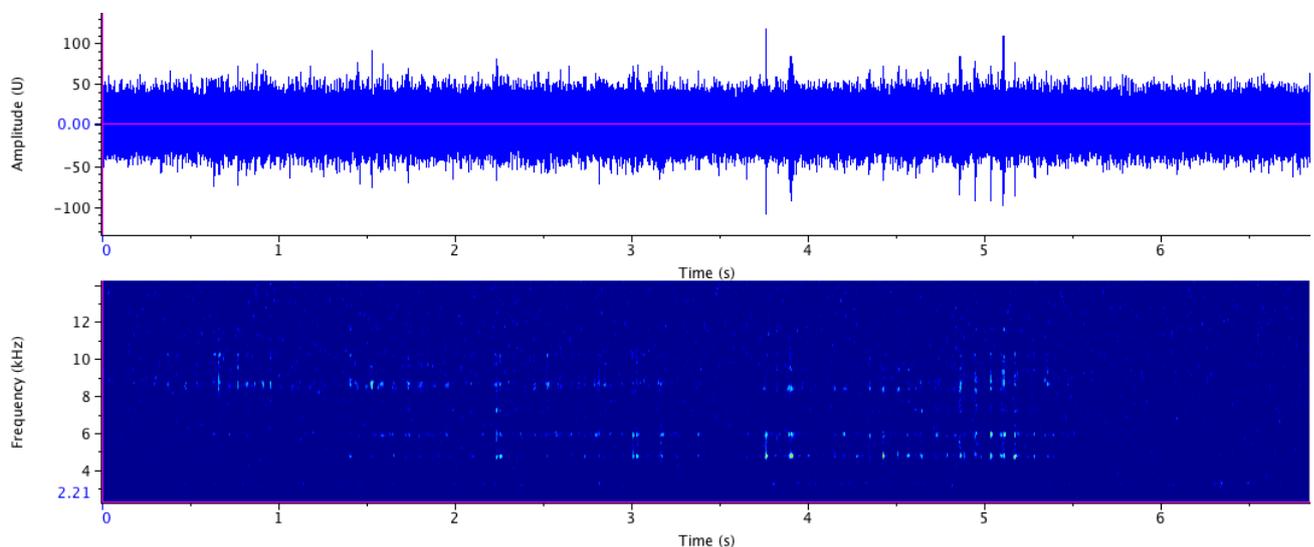
The behavioural function of these stridulations are yet to be properly described due to difficulties associated with observing individuals whilst recording in their natural environment. However, a humming phase, which can be seen on the spectrogram above from 8.5 seconds onwards, has been attributed to pre-flight activity (Leston *et al.* 1965) and to act as a deterrent to predators by creating an unpleasant sensation in the mouth (Arrow 1942).

Hyphydrus ovatus

Hyphydrus ovatus produced a series of stridulations that sounded like ball bearings rattling inside an egg shaker. Unfortunately, no detailed study on the behavioural implications of these stridulations exists. It is likely that these stridulations were the product of stress caused by the removal of the beetle from its natural environment into the field tank.



Rhantus frontalis



The stridulation produced by *Rhantus suturalis* consisted of a rapid pulse train of predominantly high frequency clicks. Although stridulatory studies on *R. suturalis* are lacking, Smith (1973) suggested that stridulations are used to coordinate emigration from unfavourable habitats in the North American *R. gutticollis* (Say) and *R. binotatus* (Harris). Perhaps a similar behaviour is true for British species.

Although more study is required in order to determine the presence or absence of dytiscid species from remote audio recorders alone, these recordings hint at the diversity of sounds produced, likely the result of species specific morphology and behaviours. Additionally, there is future potential for non-invasive acoustic monitoring for assessing aquatic habitats.

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 SMITH R L 1973. Aspects of the biology of three species of the genus *Rhantus* (Coleoptera: Dytiscidae) with special reference to the acoustical behavior of two. *Canadian Entomologist* **105**(6) 909-919.

Received April 2018

AGABUS LARVAE

Some members might recall that seemingly ordinary grassy ditch in Kolonia Ignatów during our Polish meeting in 2016, just about the westernmost site for *A. pseudoclypealis*, according to this latest distribution map. Its third instar larva is compared with that of *A. clypealis* and keyed against the rest of the *Agabus confinis* group of the subgenus *Acatodes*. The idea of a sub-group for *A. clypealis*, *A. pseudoclypealis* and *A. setulosus* (Sahlberg) is supported on the basis of the completely sclerotised abdominal segment 6. The author for correspondence is Helena Shaverdo.

NILSSON A N, GEIJER J, SHAVERDO H & BERGSTEN J 2017. Larval morphology of *Agabus clypealis* (Thomson, 1867) and *A. pseudoclypealis* Scholz, 1933 and notes on their distribution (Coleoptera: Dytiscidae). *Aquatic Insects* **38** 141-169.

LACCOPHILINAE IN BELIZE

Seven species of *Laccophilus* and *Laccommimus pumilio* (LeConte) are known from Belize, four of the *Laccophilus* being newly reported on the basis of the survey in 2015. *L. pumilio* had recently been split off in *Laccommimus* Toledo & Michat.

SCHEERS K & THOMAES A 2018. The Laccophilinae Gistel. 1848 of Belize (Coleoptera: Dytiscidae). *Belgian Journal of Entomology* **65** 1-18.

MACROPLEA RESEARCH

Research into these elusive animals usually results in more mystery, and we certainly have some mysteries demonstrated here. *M. appendiculata* (Panzer), *M. mutica* (Fab.) and *M. pubipennis* (Reuter) occur on the Finnish side of the Baltic. The first mystery is why *M. pubipennis* is confined to Finland and China. *M. pubipennis* cannot fly, so how did it get to two such widely separated areas? The authors cite eggs of *M. mutica* surviving through the digestive system of mallard ducks, opening up the possibility of "zoochory". The main finding of this paper is that there are three *Macrolea appendiculatas*, though there are not yet enough adult specimens known of two clades to decide whether they can be distinguished morphologically, or to permit naming them. The second finding is that all five species can occur together in the Bothnian Sea on the same water plants at the same salinity. As to plant preference the results support previous findings that *Potamogeton pectinatus* L. is the hostplant of choice followed by *Myriophyllum* species. But *Macrolea* do not feed on *Myriophyllum*, simply using it as shelter and on which to reproduce. As to finding *Macrolea*, the authors resorted to scuba diving in deep water, or to snorkelling and use of transparent-bottomed buckets, as well as pulling up plants. This paper serves as a reminder for a highly citable paper that escaped comment earlier – concerning how the eggs of *M. mutica* survived transit through a mallard duck (LAUX J-J & KÖLSCH G 2014. Potential for passive internal dispersal: eggs of an aquatic leaf beetle survive passage through the digestive system of mallards. *Ecological Entomology* **39** 391-394).

VAHTERA V, LAAKSONEN R, KIVILUOTO S, KAUNISTO K M & BISTRÖM O 2018. Sympatric occurrence of three leaf beetles species of *Macrolea* Samouelle, 1819 (Coleoptera, Chrysomelidae, Donaciinae) in Finland with a key to species in Northern Europe. *Aquatic Insects* **38** 21-42.

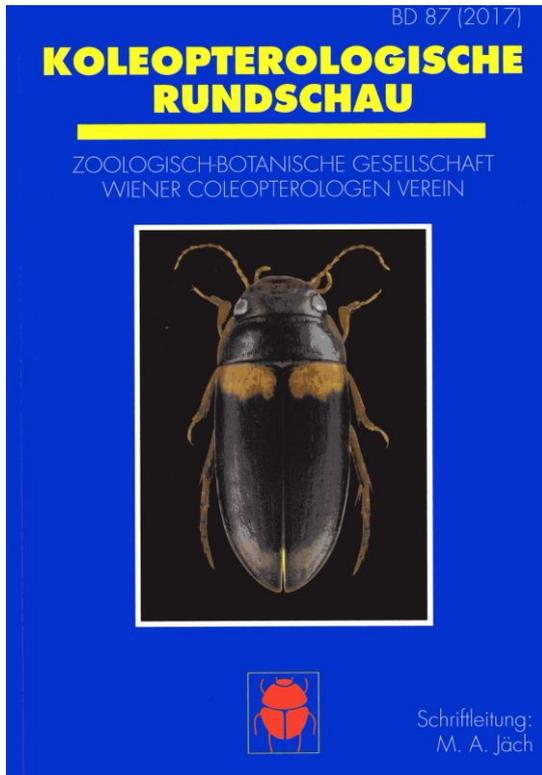
WICKEN FEN RECORDS

Wicken Fen, one of the oldest nature reserves in the world, continues to generate beetle interest. This paper notes new records for *Agabus undulatus* (Schrank), *Donacia cinerea* Herbst, *D. sparganii* Ahrens, and *D. thalassina* Germar.

WARRINGTON S, HARRISON T, KIRBY P, LANE S & TELFER M 2018. Noteworthy beetles found at Wicken Fen, Cambridgeshire, between 2008 and 2017. *The Coleopterist* **27** (1) 1-8.

KOLEOPTEROLOGISCHE RUNDSCHAU 87

Another bumper crop of papers, through which is weaved (pp. 14, 36 and 282) a review of *Diving Beetles of the World* by Kelly Miller and Johannes Bergsten.

**INDIAN COPELATI DAVIDBOUKALI**

Copelatus davidi is described as a species near to *C. boukali* Hendrich & Balke, not only morphologically, but etymologically and as a neighbour in the south of India.

WEWALKA G 2017. A new species of the *Copelatus trilobatus* group from Kerala, South India (Coleoptera: Dytiscidae). *Koleopterologische Rundschau* **87** 9-13.

DJIBOUTI COPELATUS

The new species (illustrated also on the front cover left) is obviously very close to *C. gestroi*, but then it turns out that the holotype of that species, a female from Eritrea, looks different from material from the Sinai, Israel and the Arabian Peninsula.

WEWALKA G & JÄCH M A & DIAZ J A 2017. Description of *Copelatus djiboutensis* sp. n., and notes on *C. gestroi* (Sharp, 1882) (Coleoptera: Dytiscidae). *Koleopterologische Rundschau* **87** 15-26.

DYTISCUS FOOD

A method is described to make food capsules packed with raw beef which can be fed upon by captive larvae. The product rather resembles a meal recently had in a Michelin Star restaurant in Edinburgh for which I paid £10 extra for Wagyu beef. When it arrived it was so small that I thought it was an *amuse bouche*. Would *Dytiscus* appreciate Wagyu?

AICHINGER F 2017. Bemerkungen zur Aufzucht von *Dytiscus marginalis* L., 1758 (Coleoptera: Dytiscidae). *Koleopterologische Rundschau* **87** 27-30.

HALIPLUS LIAPHLUS STUDY

The finger-like process (digitus) on the tip of the left paramere used to be thought significant in recognising several new species, but re-examination of these taxa based on more material indicated the need to synonymise several names, three going under *H. abbreviatus* Wehncke, *H. davidi* van Vondel being sunk as a synonym of *H. disruptus* Balfour-Browne and *H. holmeni* van Vondel as a synonym of *H. sharpi* Wehncke.

VAN VONDEL B J & LITOVKIN S V 2017. Five new synonymies in *Halipplus* subgen. *Liaphlus* Guignot, based on the variability of the left paramere (Coleoptera: Haliplidae). *Koleopterologische Rundschau* **87** 31-35.

PROSECCO HYDRAENA

Hydraena kahleni is described from the Veneto as a species close to *H. saga* d'Orchymont. Several trips to the site produced nine specimens in an area where *H. tarvisina* (Ferro) dominates.

JÄCH M A & DIAZ J A 2017. New and little known Palearctic species of the genus *Hydraena* (s.l.) Kugelann, 1794 XII. Description of a new species of the *H. saga* complex from Italy (Coleoptera; Hydraenidae). *Koleopterologische Rundschau* **87** 37-50.

DJIBOUTI HYDRAENIDAE

The two species of *Hydraena*, *arabica* Balfour-Browne and *quadricollis* Wollaston are keyed, as are the two *Limnebius* (*Bilimneus*), *arabicus* Balfour-Browne and the newly described *josianae*, and the three *Ochthebius*, the newly described *loulae*, *O. micans* Balfour-Browne, and a species in the *O. marinus* group resembling *chappuisi* d'Orchymont.

JÄCH M A & DELGADO J A 2017. Hydraenidae of Djibouti, with description of two new species (Coleoptera: Hydraenidae). *Koleopterologische Rundschau* **87** 51-84.

NEW SICILIAN OCHTHEBIUS

The rockpools at Cefalù (right) teem with *Ochthebius quadricollis* Mulsant amongst the rejectamenta from the restaurants, but David Bilton managed to detect another species, described here

JÄCH M A & DELGADO J A 2017. Revision of the Palearctic species of the genus *Ochthebius* Leach, 1815 XXXII. *Ochthebius* (*Cobalius*) *biltoni* sp.n. from Sicily (Italy). *Koleopterologische Rundschau* **87** 85-88.



CHINESE ATRACTOHELOPHORUS

Has anyone else ever described a new species using a combination of extant and postglacial fossil material as types? The new *Helophorus sinoglacialis* is actually known from fragments in peaty hummocks in the permafrost in the Chinese Altai up to 10,000 years before present, but the holotype is a female found by I.I. Kabak in 2015, also in the Altai, and detected as of interest by Sergey Ryndevich. Sergey's notification to Robert Angus coincided with Robert's detection of the same species in Tianshu Zhang's fossil material on which she is working for her Ph.D.

In 1886 Kuwert erected the subgenus *Atractohelophorus* for those aquatic *Helophorus* lacking the scutellary striae on the elytra and with the more or less symmetrical apical segment to the maxillary palp - as opposed to *Rhopalohelophorus* in which the last segment is asymmetrical and more elongate. David Sharp in 1915 had noted that the names were really the wrong way around, "*atracto*" meaning prolonged and "*rhopalo*" meaning knobbed. He damned Kuwert with the statement "Those to whom the names [of the two subgenera] are not yet familiar will do well to recollect this curious error, especially as it is an instructive illustration of Kuwert's hasty work." Robert and his co-authors defend the convenience of continuing to use *Atractohelophorus* as "an informal species group" until such times as DNA proves whether *Rhopalohelophorus* and *Atractohelophorus* can be considered distinct subgenera, but the need to change their original names back from the unjustified emendations *Atracthelophorus* and *Rhopalhelophorus* is accepted. This paper concludes with a review of the *Atractohelophorus* group, with depiction of 19 species.

ANGUS R B, RYNDEVICH S K & ZHANG T 2017. A new species of *Helophorus* Fabricius, 1775 from the Chinese Altai, with notes on the former subgenus *Atractohelophorus* Kuwert, 1886 and selected species (Coleoptera: Helophoridae). *Koleopterologische Rundschau* **87** 239-252.

NEW STENELMIS

Stenelmis is the largest and most widespread elmid genus, with 176 species found almost everywhere except the Australian and Neotropical regions. *S. hikidai* is described and keyed as the fourth member of the *S. hisamatsui* species group.

KAMITE Y & NAKAJIMA J 2017. Notes on the *Stenelmis hisamatsui* species group in Japan, with description of a new species from Kumejima, Ryukyu Islands (Coleoptera: Elmidae). *Koleopterologische Rundschau* **87** 253-273.

SOUTH AMERICAN HETERO CERUS

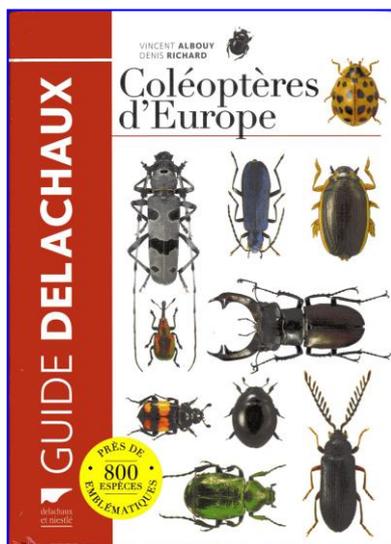
Heterocerus sazhnevi, newly described from the Mato Grosso, is compared with *H. rawlini* Mascagni. The latter is mentioned three times as having been described in 1933 and twice as in 1993. Assuming we are talking about Alessandro Mascagni (see next paper) 1933 would indicate quite a long career!

SKALICKÝ S 2017. New faunistic records of Heteroceridae, mainly from Brazil, with description of a new species of *Heterocerus* Fabricius, 1792 (Coleoptera: Heteroceridae). *Koleopterologische Rundschau* **87** 275-281.

VIETNAMESE AUGYLES

An *Augyles* linked to the *A. hispidulus* group is described from a paddy field in Hai Dong province. Its name, *gigas*, suggests some size, 5.7 mm presumably being large for an *Augyles*.

MASCAGNI A, THANH BINH T T & HA N T 2017. A new species of *Augyles* Schiödt, 1866 from Vietnam (Coleoptera: Heteroceridae). *Koleopterologische Rundschau* **87** 283-287.



COLÉOPTÈRES D'EUROPE

ALBOUY V & RICHARD D 2017. *Coléoptères d'Europe*. Paris: Delachaux et Niestlé. €34.50 in France

About 800 of the 20,000 beetles found in Europe are illustrated here, with brief descriptions of their morphology, ecology and distribution. The images are very good, almost certainly based on stacked photographs. The give-away for me was No. 142, that *Halplus ruficollis* giving a sideways glance, also to be seen as Plate 23 in the *Royal Entomological Society Handbook*, and originally No. 26 in Jiří Hájek's *Icones Insectorum Europae Centralis*. Nothing wrong with that, of course, it's excellent value to have so many good illustrations well laid out as an introduction to beetles. But, of course, one can only have a few examples of each family, e.g. 15 Dytiscidae, 4 Gyrinidae, so do not expect anything

more than an introduction. This is a distinct improvement on the *Guide des coléoptères d'Europe*, also produced by Delachaux et Niestlé. The book ends with *Connaître les coléoptères*, an attempt to cover organisations, internet sites, and guides in Europe. The *Ouvrages francophones* appear to cover the major possibilities including the new French catalogue produced by the Association Roussillonnaise d'Entomologie. However, entries for Royaume Uni do not include *The Coleopterist*, let alone the B~BC.

LAOTIAN CLYPEODYTES

2.05 mm long might not generally be considered "large" but it is by bidessine standards. The new species was found in Laos in 2010 during a survey organised by the late Michel Brancucci and others including Michael Geiser, who took the type material. The most similar looking taxa are *Clypeodytes jaechi* (Wewalka & Biström) and an aberration of *C. gestroi* (Régimbart) named *subniger* by Felix Guignot.

HENDRICH L, BRANCUCCI M & BALKE M 2018. *Clypeodytes geiseri* sp. n., an enigmatic Bidessini from Laos (Coleoptera: Dytiscidae, Bidessini). *Aquatic Insects* doi.org/10.1080/01650424.2018.1460483 7 pp.

BULGARIAN BEETLES

Surveys were carried out in 2010, 2011 and 2015, producing 137 species of which 23 are new for Bulgaria. Sites visited range from salt pans on the Black Sea to montane lakes. Interesting species include *Agabus caraboides* Sharp, *Bidessus calabricus* Guignot, *Boreonectes riberae* (Dutton & Angus), *Hydroporus hebaueri* Hendrich, *H. nigellus* Mannerheim, *Ilybius samokovi* (Fery & Nilsson), *Melanodytes pustulatus* (Rossi), *Hygrotus lernaeus* (Schaum), *Enochrus ater* (Kuwert), and *E. politus* (Küster).



Lake Zhabeshkoto (Жабоешкото езеро), an oligotrophic lake in the Pirin mountains – with *Boreonectes riberae*, *Hydroporus hebaueri* and *H. nigellus*. Photo: Krzysztof Lübecki

GREN C & LUBECKI K 2018. Water beetles (Coleoptera: Adephaga, Hydrophiloidea, Byrrhoidea) in Bulgaria: new records. *Annals of the Upper Silesian Museum in Bytom* **26** 1-20.

HYDROVATUS IN BELGIUM

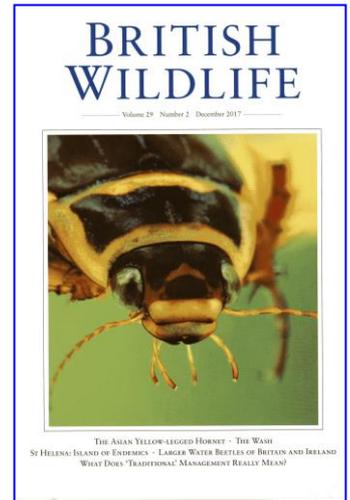
H. clypealis is known in Belgium from one pond in West Flanders, where it was first found in 2017. The site is depicted and its beetle fauna listed. Belgian records for *H. cuspidatus* have almost tripled since Kevin's 2014 paper (see **Latissimus** 36 19). These have been mainly in the Flemish region. Overall distributions are provided for both species. Photographs very nicely show the subtle differences in profile of the head between the two species.

SCHEERS K 2017. *Hydrovatus clypealis* Sharp, 1876 expands its distribution in Belgium, with an update on the distribution of *H. cuspidatus* (Kunze, 1818) (Coleoptera: Dytiscidae) *Bulletin de la Société royale belge d'Entomologie* **153** 198-202.

BIG BRITISH BEETLES

This paper is unusual and welcome in *British Wildlife* in that it describes an enthusiast's quest, sometimes successful and sometimes frustrated. If one stands on a chair in our spare bedroom you can see the site for *Dytiscus lapponicus* Gyllenhal on Arran, though it is 45 km away, with a lot of sea between. Many people have used that bedroom on the way to seeking this beetle. Thus I can well understand this consuming passion, but one can only hope it leads to a wider appreciation of water beetles, most of which are much easier to find than the larger *Dytiscus* – and often a lot easier to identify with certainty. Peter gets down as small as *Hygrotus parallelogrammus* (Ahrens), and still has to find some of the larger species, so we might expect a sequel.

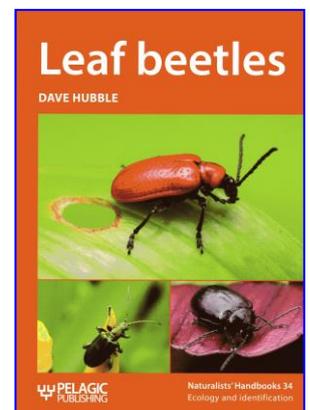
SUTTON P 2017. In search of the larger water beetles of Britain and Ireland. *British Wildlife* **29** 106-112.



LEAF BEETLES HANDBOOK

 HUBBLE D 2017. Leaf Beetles. *Naturalists' Handbooks* **34**. Pelagic Publishing. ISBN 978-1-78427-150-3 available for upwards of £18.

These handbooks are not intended to be comprehensive guides but are there to encourage field study. Chapters on life history and the chrysomelid environment make good reading. A chapter on natural enemies is particularly interesting at the microscopic level but its coverage of hymenopteran parasitoids is rather thin. It was disappointing that that fascinating associations of some *Chrysomela* with the ectoparasitoid *Lebia* ground beetles is not mentioned. This book does not contain a complete set of keys and its coverage of distribution maps (70 from 286 species) does not claim to be complete either. An atlas was produced by Mike Cox in 2007, and this is fully acknowledged as a source. Unfortunately, and presumably subsequent to this book going to press, the keys in it have been upstaged by Mike Cox's in Andrew Duff's beetles guide (2016. *Beetles of Britain and Ireland. Volume 4: Cerambycidae to Curculionidae*. West Runton: A.G. Duff (Publishing). The author draws heavily on information and illustrations used in his earlier AIDGAP publication (2012. *Keys to the adults of seed and leaf beetles of Britain and Ireland*. Telford: FSC Publications). The wetland chrysomelids are mainly represented by photographs and distribution maps for the two species of *Macrolea* and by five of the 15 possible *Donacia*. This is asking for trouble as *Plateumaris* are not depicted, something bound to result in identification errors given their relative commonness and their similarity to *Donacia*.



NORTH HOLLAND DUNES

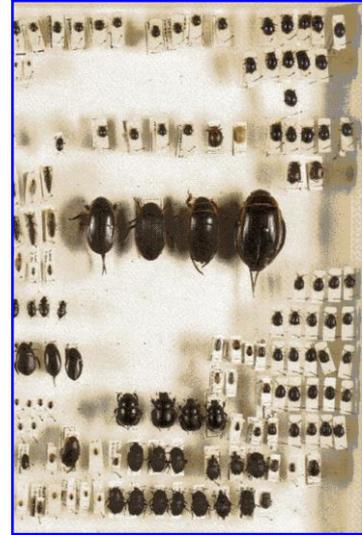
The exemplary activities of the Nederlandse Entomologische Vereniging continue with its 171st summer meeting in the province of Noord-Holland. Forty-seven entomologists identified 1,313 arthropod species. Oscar Vorst is named as the principal compiler of beetle data. The best water beetles appeared to be *Graphoderus zonatus* (Hoppe), *Augyles hispidulus* (Kiesenwetter) and *Chaetocnema aerosa* (Letzner), a flea beetle living on spike-rushes (*Eleocharis*), though perhaps the least aquatic *Helophorus porculus* Bedel might also be of interest to some.

FRANKEN O & BERG M P (compilers) 2018. Entomofauna van de Noord-Hollandse duinen. *Entomologische Berichten* **78** 42-69.

GUSTAV GREINER-VETTER 1879-1944

📖 BELLSTEDT R, HEUER A & BÜCHNER U 2018. *Die vergessene Insektensammlung des Tieraugenmalers Gustav Greiner-Vetter (1879-1944)*. Falter, Käfer und andere Krabbeltiere aus dem Thüringer Schiefergebirge. Gotha: Schloss Friedenstein. ISBN 978-3-940998-42-2

This is a comprehensive review of the collections of Gustav Greiner-Vetter, whose job was to paint porcelain eyes for humans, for puppets and for taxidermy. Amongst the beetles the outstanding specimen is the collection is a *Dytiscus latissimus* L. from Sichelreuth in southern Thuringia in 1925.

**STREAM FAUNA DIVERSITY NORTH-SOUTH**

Sixty-two stream sites were sampled in six mountain regions, the Rif in Morocco, the Baetic of southern Spain, the Picos in northern Spain, the Jura in France, the Carpathians in Slovakia, and representing the Subarctic, the Jämtland in Sweden. DNA sequencing was done for 18 orders, 87 families and 197 genera of freshwater macroinvertebrate. The Rif had the most unique genera (13) followed by the Picos (11) and Jämtland (10). Fifteen genera were restricted to the Mediterranean area. DNA sequences were got from 3,113 individuals of 118 species with 791 unique Cytochrome oxidase haplotypes. No species could be found across the whole range, the most widely distributed ones being either from the Rif to the Picos or from Jura to Jämtland. Most haplotypes were confined to a single region. Unlike studies of some terrestrial arthropods that support the idea of postglacial recolonisation from southern refugia this was only partly the case for stream species. Diversity within sites and within regions decreased with latitude, but this was mainly limited to the genus level and otherwise was weak. This is interpreted as showing the importance of climatic differences and other local factors in dictating what species live where, as opposed to dispersal from southern refugia. The most obvious beetle finding is that the diversity of elmids is higher than for hydraenids but that the regression with latitude is the same for both groups. Beyond that life gets tough – section 4.4 of the discussion begins with “Patterns of local diversity at multiple hierarchical levels might be coupled under various local scenarios of stochastic dispersal and community persistence....” All that and just “might”? And SGDC must be a four-letter acronym popular among *Molecular Ecology* readers (it means a species-genetic diversity correlation). There appears to be an over-arching set of rules dictating diversity in mountain streams but biomonitoring must extend beyond family level and must be based on a region’s fauna, with DNA-sequencing of faunal catches increasingly being able to offer the right level of assessment to understand management needs and conservation problems.

MÚRRIA C, BONADA N, VELLEND M, ZAMORA-MUÑOZ C, ALBA-TERCEDOR J, SAINZ-CANTERO C E, GARRIDO J, ACOSTA R, EL ALAMI M, BARQUIN J, DERKA T, ÁLVAREZ-M, SÁINZ-BARIAIN M, FILIPE A F & VOGLER A P 2017. Local environment rather than past climate determines community composition of mountain stream macroinvertebrates across Europe. *Molecular Ecology* doi: 10.1111/mec.14346 1-15.

CUBAN HALIPLUS

Eleven species of *Haliphus* are known from the Antilles, including this newly described, brightly marked *H. alberti* from a lagoon at the west of end of Cuba.

MEGNA Y S, HENDRICH L & BALKE M 2018. A new species of *Haliphus* Latreille, 1802 from Cuba (Coleoptera: Haliplidae). *Aquatic Insects* 38 pp 1-9.

EGYPTIAN POLYPHAGA

Basic information is supplied on 21 species in 13 genera in the families listed in the title. Unfortunately, the annotations do not include any new data but this is still a useful basis for further work. Four species, all *Helophorus*, are excluded from the checklist.

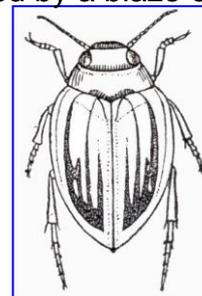
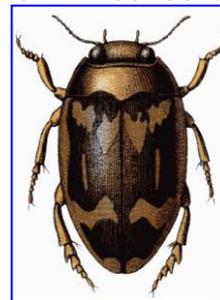
SALAH M 2017. An annotated checklist of the aquatic Polyphaga (Coleoptera) of Egypt III. Families: Helophoridae, Georissidae, Hydrochidae, Spercheidae, Scirtidae, Elmidae, Dryopidae, Limnichidae and Heteroceridae. *Polish Journal of Entomology* **86** 119-140.



BEETLES IN NEW NATURALISTS LIBRARY

📖 JONES Richard 2018. *Beetles*. London: William Collins. ISBN 978-0-00-814952-9 The dustcover price of the hardback is £65 but online copies can be had a little cheaper, down to £52.99, and paperback copies cheaper still.

There is a rumour that some New Naturalists aficionados do not even remove the cellophane sealing wrapper for fear of damaging these sacred objects. Certainly I remember one author who, when asked to sign his work, pointed out that it would detract from the book's value. So, does anyone need to read these bibliophile's treasures? In this case, yes, a good read about land beetles. But *Latissimus* is only about wetland beetles so anything said here does not count as a full review. A sense of guilt begins at page 165, the first proper comment on a water beetle. Was the only specimen of *Megadytes ducalis* Sharp found in the bottom of a dugout canoe, or did I just make it up? We are on safer ground on page 176 when the next supposedly extinct beetle, *Laccophilus poecilus* Klug, heads up three and a bit pages on fresh waters. OK, so only extinct in Britain – last seen in Sussex in 2002, having chosen a most unfortunate place to make its final stand. A few more paragraphs in Chapter 7, concerning beetle families. An unexpected choice here, the use of Edmund Reitter's early 20th Century illustrations. Nowadays one is so used to stacked images in fantastic 3D detail, usually accompanied by a blaze of diode light reflections, that this retrospective is rather refreshing even though, for example, *L. poecilus*, as seen here, is done no favours. A key to the commoner families is provided on pages 262-279, signified by green-edged paper. Here the line drawings from Norman Joy's *Handbook* are recycled instead, presumably for a similar reason, i.e. out of copyright. Well done Richard for an excellent stab at 4,000 species. Let's hope the next promised NN, based on a single species, the hedgehog, can come up to that mark.



SLOVAK RIVER STUDY

The Myjava River runs in the Carpathians and has had a reservoir built on it associated with some canalisation. Biological data suggest some improvements but the only beetle taxa identified are *Elmis aenea* (Müller) and *Stenelmis* sp.

HRDLICOVÁ E & BULÁNKOVÁ E 2017. Ekologické a hydromorfologické hodnotenie monitorovaných lokalít horného úseku rieky myjavy. *Folia faunística Slovaca* **22** 93-101.

MOROCCAN STUDIES

Seventeen sites in the catchment of the Bouregreg in the Middle Atlas were surveyed in 2012/13. Sixty-three species of beetle were among the 90 species of macroinvertebrate. Six Moroccan endemics were present:- *Nebrioporus nemethi* (Guignot), *Graptodytes atlantis* (Théry), *Helophorus theryi* d'Orchymont, *Limnebius kocheri* Balfour-Browne, *L. mesatlanticus* (Théry), and *L. zaerensis* Hernando *et al.* The presence of *Hemisphaera seriatopunctata* (Perris) is confirmed in Morocco. Professor Nard Bennis's email address is given for correspondence.

The ever watchful Paweł Buczyński came across a paper published in 2014, better here now than not at all. It concerns the macrofauna of the Khoumane River, running out of the Middle Atlas to the Atlantic. Among the 17,124 specimens of macrofauna sampled, 7.7% were beetles but only two species were identified – *Gyrinus urinator* Illiger and *Laccobius gracilis* Motschulsky.

BEN MOUSSA A, CHAHLAOUI A, ROUR E & CHAHBOUNE M 2014. Diversité taxonomique et structure de la macrofauna benthique des eaux superficielles de l'oued khoumane. Moulay idriss Zerhoun, Maroc (Taxonomic diversity and structure of benthic macrofauna of surface water of Khoumane River. Moulay idriss Zerhoun, Morocco). *Journal of Materials and Environmental Science* **5** 183-198.

CHAKOUR R, L'MOHDHI O, EL HAISSOUFI M, SLIMANI M, HIMMI O, EI AGBANI M A & BENNAS N 2017. Nouvelles données sur les insectes aquatiques du bassin versant de Bouregreg (Plateau Central Marocain). I: Coleoptera, Hemiptera et Odonata. *Boletín de la Sociedad Entomológica Aragonesa* **61** 306-322.

WHATSAPP IN BALI

The Balinese aquatic Coleoptera are quite well known, providing a basis for this experiment in "parataxonomy", taxonomy by Citizen Science. The Indonesian-built Polytron handphone 4G450 was deployed to collect images of water beetles. The parataxonomist, who collects beetles in his spare time, was also provided with a laptop and he used WhatsApp to share results with experts, sending on alcohol-preserved material when more detailed examination was desirable. This resulted in many records of water beetles already known plus *Hydaticus luczonicus* Aubé and *Eretes griseus* (Fab.) new for Bali. The author for correspondence is Michael Balke.

SUPRAYITNO N, NARAKUSOMO R P, von RINTELEN T, HENDRICH L & BALKE M 2017. Taxonomy and biogeography without frontiers – Whatsapp, Facebook and smartphone digital photography let citizen scientists in more remote localities step out of the dark. *Biodiversity Data Journal* doi: 10.3897/BDJ **5**.e19938 38 pp.

THREE AFRICAN COPELATUS

The newly described species are *falcifornis* from the Ivory Coast, in Guignot's *irinus*-group, the Senegalese *saverii* and the Nigerian *quadristriatus*, both in Guignot's *longicornis* group in the *nitidus* subgroup.

PEDERZANI F & SCHIZEROTTO A 2017. Description of three new African species of *Copelatus* Erichson, 1832 with notes on *Copelatus angolensis* Peschet, 1924. (Insecta: Coleoptera: Dytiscidae). *Quaderno di Studi e Notizie Naturale della Romagna* **46** 121-128.

NEW PARHYDRAENA

Parhydraena cataracta is described from a cool gully high up in the Hex River Mountains of South Africa. It is most near to *P. toro* Perkins.

BILTON D T 2018. A new humicolous *Parhydraena* d'Orchymont, 1937 from South Africa (Coleoptera, Hydraenidae). *Zootaxa* **4378** 284-288.

PICOS BEETLES

Three lakes and a stream above 1,700 metres were investigated in Los Picos de Europa National Park. Forty-one species of beetle are reported. These include the Iberian endemic *Hydroporus nevadensis* Sharp, *H. vagepictus* Fairmaire & Laboulbène, *Nebrioporus carinatus* (Aubé), *Hydraena emarginata* Rey, *Limnebius gerhardti* Heyden, *Oulimnius tuberculatus perezii* (Crotch), and *Limnius perrisi carinatus* (Pérez-Arcas). The majority of species are common European ones, with *Hydrobius fuscipes* s. str. being specifically mentioned.

MIGUÉLEZ D & VALLADARES L F 2017. Nuevos datos sobre la fauna de coleópteros y hemípteros acuáticos en áreas de alta montaña del Parque Nacional de Los Picos de Europa (Norte de España). *Boletín de la Sociedad Entomológica Aragonesa* **60** 28-284.

POLISH LIST

The beetles of the Kępa Redłowska area of Gdynia are reported. The 764 species include two Gyrinidae, *Noterus crassicornis* (Müller), 21 Dytiscidae, 9 Helophoridae, 23 Hydrophilidae, *Limnebius parvulus* (Herbst), two *Dryops*, *Heterocerus fuscus* (Kiesenwetter), four Donaciinae, and two *Bagous*. *Hydroporus incognitus* Sharp, *Helophorus asperatus* (Rey), *H. discrepans* (L.), *Coelostoma orbiculare* (Fab.), *Enochrus melanocephalus* (Olivier) and *Bagous subcarinatus* (Gyllenhal) are Rare in Poland. *Enochrus bicolor* (Fab.) and *Cercyon littoralis* (Gyllenhal) are rated as Endangered.

KONOPKO D, KOWALCZYK J K, KOMOSIŃSKI K, SIENKIEWICZ P, ALEKSANDROWICZ O, PREZWOŹNY M, KONWERSKI S, MOCARSKI Z, LASECKI R & BUCHHOLZ L 2017. Materiały do znajomości chrząszczy (Insecta: Coleoptera) Kępy Redłowskiej w Gdyni. *Przegląd Przyrodniczy* **28** 45-72.

SICILIAN LIST

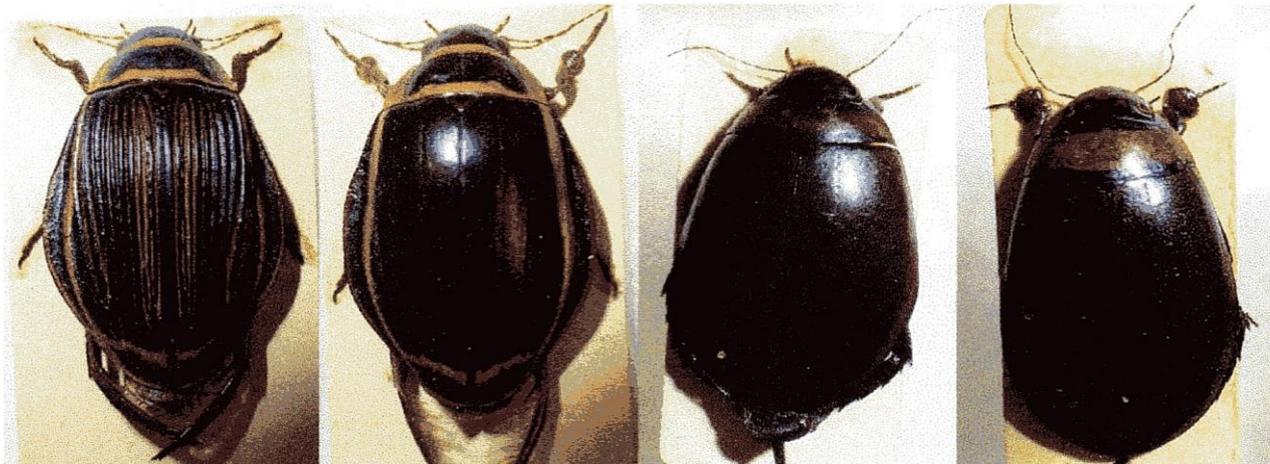
The Anguillera Ponds provide one of the last surviving inland wetlands in the province of Trapani on the western extremity of Sicily. The beetle list includes *Gyrinus substriatus* Stephens, *Haliphus lineatocollis* (Marsham), *Graptodytes flavipes* (Olivier), *Hydroporus planus* (Fab.), *Metaporus meridionalis* (Aubé), *Hyphydrus aubei* Ganglbauer, *Helophorus alternans* Gené, *H. brevipalpis* Bedel, *H. flavipes* Fab., *H. milleri* Kuwert, *Berosus affinis* Brullé, *B. signaticollis* (Charpentier), *Hydrobius fuscipes* s. lat., *Laccobius neapolitanus* Rottenberg, *Ochthebius dilatatus* Stephens, and *O. viridis* s. lat. Saverio Rocchi is noted as being amongst those identifying material.

TROIA A, ADRAGNA F, CAMPISI P, CAMPO G, DIA M G, ILARDI V, LA MANTIA T, LA ROSA A, LO VALVO M, MUSCARELLA C, PASTA S, PIERI V, SCUDERI L, SPARACIO I, STOCH F & MARRONE F 2016. I Pantani di Anguillara (Calatafimi Segesta, Trapani): dati preliminary sulle biodiversità a supporto della tutela del biotopo. *Naturalista siciliano*, series 4, **40** 171-200.

NEW TIBETAN HELOPHORUS

Those familiar with *Latissimus* might have noticed our attempt to get promotion from the supermarket Sainsbury's (see *Latissimus* **39** 24). *ZooKeys* has gone the same way, with the same illustration used for the habitat of *Helophorus dracomontanus*. This is in the subgenus *Helophorus*, but with the front corners of the thorax like in the subgenus *Gephelophorus* and the almost symmetrical, short, metallic-black apical segments to the maxillary palps as in the subgenus *Kyphohelophorus*, i.e. a non-tuberculate relative of *H. tuberculatus*. As to the mountain dragon name, Feng could be a peak and Long a dragon.

ANGUS R B 2017. A remarkable new *Helophorus* species (Coleoptera, Helophoridae) from the Tibetan Plateau (China, Sichuan). *ZooKeys* **718** 133-137.

DYTISCUS LATISSIMUS AND GRAPHODERUS BILINEATUS IN LUND MUSEUM

This report includes lists of the specimens of *Dytiscus latissimus* L. and *Graphoderus bilineatus* (De Geer) to be found in Lund Zoological Museum. There are no contact details but the report can easily be found by Googling.

BILLQVIST M 2016. Genomgång och digitalisering av trollsländor och dykarskalbaggar på Lunds Zoologiska museum. *Naturvårdsverket* Ärendenummer NV-02022-16, contract number 3329-16-005, 1-9

MELADEMA ORIGINS

Nuclear and mitochondrial DNA extracts establish the existence of four distinct lineages within this genus based on the three known species plus *Meladema lepidoptera* Bilton & Ribera (see **Latissimus 40** 29), now described from Corsica, Sardinia and Montecristo. Eleven tested individuals were free from infection by *Wolbachia*, a Gram-negative *Rickettsia* bacterium with its own Cytochrome oxidase potentially causing misleading results based on mitochondrial DNA alone. Diversification of the present lineages began in the early Pleistocene, with a continental origin in the Middle Miocene, and subsequent separate colonisations of the Macaronesian and Mediterranean islands. Seasonality, or perhaps lack of it, rules the current island distribution, with the continental *M. coriacea* Laporte having expanded its range by adaptation to a higher seasonality and aridity.

The paper specifying the Sahara Desert in the title (how many other water beetle papers can do that?) concerns DNA analysis including a specimen from the Tibesti Mountains in Chad. The elytral sculpture of this specimen suggested that it could be new, but its DNA is nested deep within *M. coriacea* Laporte. A single nucleotide difference from some specimens from the Anti Atlas and Gran Canaria indicates a very recent divergence, possibly a result of desert expansion in the Holocene.

The corresponding author is Ignacio Ribera for both papers.

RIBERA I, BILTON D T & CARDOS A 2018. The *Meladema* Laporte, 1835 (Coleoptera, Dytiscidae) of the Sahara Desert. *Zootaxa* **4399** 119-122.

SÝKORA V, GARCÍA-VÁSQUEZ D, SÁNCHEZ-FERNÁNDEZ D & RIBERA I 2017. Range expansion and ancestral niche reconstruction in the Mediterranean diving beetle genus *Meladema* (Coleoptera, Dytiscidae). *Zoologica Scripta* **46** 445-458.

GEORISSUS IN MONGOLIA

Georissus crenulatus (Rossi) on the banks of the Dzabkhan River in 2017 is the first record of Georissidae in Mongolia.

SAZHNEV A S & PROKIN A A 2017. Georissidae (Coleoptera: Hydrophiloidea) – a new beetle family for the fauna of Mongolia. *Far Eastern Entomologist* **347** 22-24.

TEMPORARY FLOODING INCREASES BIODIVERSITY

The effects of flooding were studied on temporary and permanent wetlands in the Murray-Darling Basin. Macroinvertebrate diversity was higher in permanent wetlands, but ephemeral ones supported a much greater macroinvertebrate abundance and biomass. Early-colonising beetles contributed hugely to biodiversity in ephemeral wetlands. So, just for once, a favourable response for a paper not mentioning a single beetle by name.

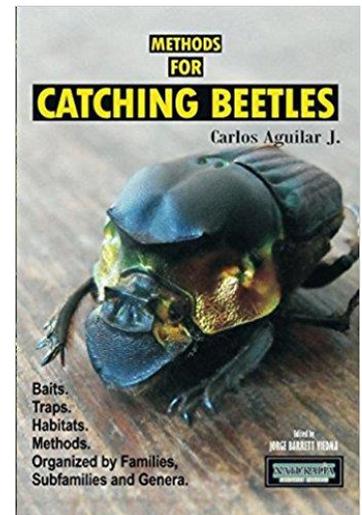
McINERNEY P J, STOFFELS R J, SHACKLETON M E & DAVEY C D 2017. Flooding drives a macroinvertebrate biomass boom in ephemeral floodplain wetlands. *Freshwater Science* **36** (4) 13 pp.

TUNA BAIT BEATS CHICKEN BAIT

Hand-netting was compared with the use of bottle traps baited with either tinned tuna or tinned chicken in the Nature Park Kopački rit, a floodplain on the banks of the Danube in Croatia. Seventy-seven water beetle species and 25 water bugs were caught. *Laccophilus poecilus* Klug was the third commonest species after two bugs. Tuna-baited bottle traps caught 580 beetles compared to 269 caught in traps with chicken, with tuna proving particularly effective for the larger and more mobile diving beetles. The faunal list makes interesting reading with, for example, *Graphoderus bilineatus* (De Geer) being netted and caught in both types of trap.

Incidentally, does anyone else keep getting advertisements from Amazon for “Methods for catching beetles. Baits. Traps. Habitat. Methods. Organized by families, subfamilies and genera. By Carlos Aguilar J.”? This book with a strangely punctuated title apparently retails at \$85 and has only attracted one star and one review “So badly printed that some illustrations are unreadable, a pity for such a high price!” If anyone has bought a copy perhaps they could provide a second review based on its merits for water beetlers?

TURIĆ N, TEMUNOVIĆ M, VIGNJEVIĆ G, ANTUNOVIĆ DUNIĆ J & MERDIĆ E 2017. A comparison of methods for sampling aquatic insects (Heteroptera and Coleoptera) of different body sizes, in different habitats using different baits. *European Journal of Entomology* **114** 123-132.



NOTERIDAE RECONSTRUCTION

Based on mitochondrial and nuclear DNA of 53 species the classification of the Noteridae (Thomson) is revised on the basis of two subfamilies, the Noterinae (Thomson) and the Notomicrinae (Zimmermann), three tribes and eight genera. The Meruidae are retained as a separate family. The Notomicrinae is used in a new sense with the Phreatodytinae (Uéno) as a synonym.

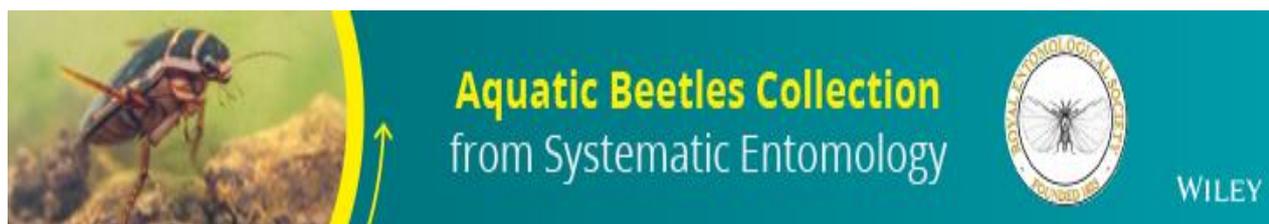
BACA S M, TOUSSAINT E F A, MILLER K B & SHORT A E Z 2017. Molecular phylogeny of the aquatic beetle family Noteridae (Coleoptera: Adephaga) with an emphasis on data partitioning strategies. *Molecular Phylogenetics & Evolution* **107** 282-292.

BELIZE COPELATUS A JAG

The new species looks like *C. terminatus* Sharp. It was found in rock pools in the Cockscomb Basin Wildlife Sanctuary in Belize. The name is based on yaguara or jaguar.

SCHEERS K 2018. *Copelatus yaguarete* sp. nov. a new species of the *Copelatus erichsoni* group from Centre America (Coleoptera: Dytiscidae). *Belgian Journal of Entomology* **66** 1-11.

AQUATIC BEETLE VIRTUAL ISSUE AND FREE PDFs

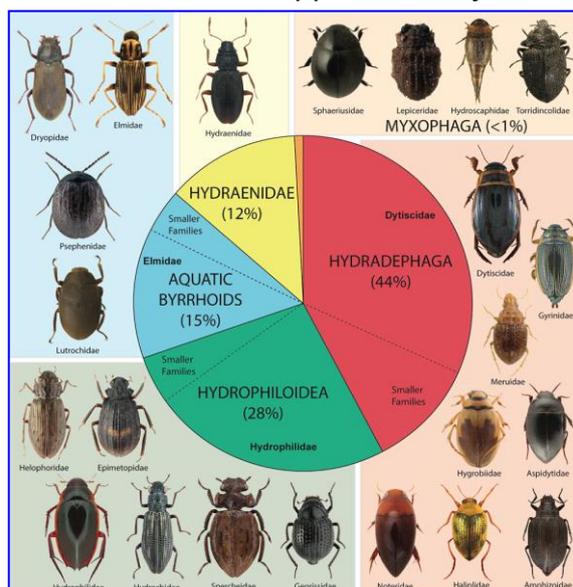


It probably seemed like a good idea at the time, but for the sake of avoiding repetition it is to be hoped that other journals do not get into this self-congratulatory kind of thing, i.e. applauding all their efforts in promoting one topic, unless of course as here it comes with free access online. The journal *Systematic Entomology* celebrated 2017 as the ‘year of the aquatic beetle’.

“A virtual issue of 12 papers from the journal was used to showcase the contemporary and selected model papers that use aquatic beetles, and to expose them free to a wider audience. Andrew Short was thanked for playing a role in leading this major research effort and for reviewing the current state and future directions in the systematics of aquatic beetles, with an additional paper covering the diversity of systematic studies and exploring their value as model systems in biology. Beside the crop of papers from 2017, the journal claims a proud history of publishing significant and often pioneering papers, including showing the value of molecular data in associating immature and adult stages. Understanding larval biology of aquatic beetles is critical to monitoring of biodiversity of aquatic habitats as well as expanding the characters available for ecological study in larger applications of phylogenies. We note here that the group ‘aquatic beetles’ obviously is not monophyletic, but is united by their ecology and by the global activities of researchers that like to get their boots muddy.” Twelve of the papers have been commented on before.

THE HORIZON IS WET

The current state of water beetlehood is reviewed, with the excess of 13,000 described species constituting “one of the most globally abundant groups of aquatic insects.” The review includes a huge table listing phylogenetic studies. The studies of most groups are contrasted with some limitations on the Hydraenidae as a whole, as opposed to *Hydraena* itself, and relationships within the families of aquatic Byrrhoidea. The fossil record gets a particular airing. Gaps in larval knowledge are identified, the benefits of the huge DNA barcoding data-base of adults being recognised as the way ahead to identify larvae (though its potential for environmental monitoring *per se* is not discussed). Under ecological radiations the extraordinary recent history of first the subterranean dytiscids of Australia and then the realisation that wet rocks provide more than just “novelties or aberrant lineages”. It is expected that hundreds more hygropetric species will be described. Horizon-scanning indicates that the water beetle community is “tantalizingly close to having a completely catalogued fauna”, and that a single, online catalogue should be the goal. Geographically the areas most likely to yield new species are tropical South America and



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that part of tropical Asia bounded by China, India and Malaysia. Surprising is omission of any mention of subspecific studies that might improve our understanding of origins and sexual behaviour.

SHORT A E Z 2017. Systematics of aquatic beetles (Coleoptera): current state and future direction. *Systematic Entomology* doi: 10.1111/syen.12270 17 pp.

DYTISCID PHYLOGENY BASED ON LARVAE

Perhaps this analysis of larval characters will prove to be the culmination of all those papers based on one set of characters rather than attempting to cover everything? This is a little unkind as 304 characters were used, well up to strength for analyses based on morphology alone. The central part of the paper is the wealth of line drawings of structures and the central part of the conclusions is an understanding of the evolution of swimming hairs in larvae. The earliest diverging lineages, the Agabinae, Copelatinae, Agabetini, and most Hydroporinae, lack these hairs. These larvae mainly inhabit the bottom. Swimming hairs evolved several times independently – in the Laccophilini, in what must have been an ancestor common to the Matinae, Colymbetinae, Coptotominae, Lancetinae, Dytiscinae and several times within the Hydroporinae. The larvae of these taxa live in vegetated microhabitats. The clade formed by the Dytiscinae and Cybistrinae developed additional hair fringes on the upper and lower sides of the femora and tibiae in all instars, and also on the tarsi of instars II and III. Dense hair fringes are also present on the seventh and eighth abdominal segments. The Dytiscini also developed hairs on the edges of the urogomphi, and, of course, such well-equipped larvae could invade open water.

MICHAT M C, ALARIE Y & MILLER K B 2017. Higher-level phylogeny of diving beetles (Coleoptera: Dytiscidae) based on larval characters. *Systematic Entomology* **42** 734-767.

Latissimus 19 26 ARCHANGELSKY M 2004. Higher-level phylogeny of Hydrophilinae (Coleoptera: Hydrophilidae) based on larval, pupal and adult characters. *Systematic Entomology* **29** 188-214.

Latissimus 20 1 SPANGLER P J & STEINER jr W E 2005. A new aquatic beetle family, Meruidae, from Venezuela (Coleoptera: Adephaga). *Systematic Entomology* **30** 339-357.

Latissimus 21 27 MILLER K B, ALARIE Y, WOLFE G W & WHITING M F 2005. Association of insect life stages using DNA sequences: the larvae of *Philodytes umbrinus* (Motschulsky) (Coleoptera: Dytiscidae). *Systematic Entomology* **30** 499-509.

Latissimus 31 19 FIKÁČEK M, PROKIN A, ANGUS R B, PONOMARENKO A, YUE Y, REN D & PROKOP J 2012. Phylogeny and the fossil record of the Helophoridae reveal Jurassic origin of extant hydrophiloid lineages (Coleoptera: Polyphaga). *Systematic Entomology* **37** 420-447.

Latissimus 32 29 MILLER K B & BERGSTEN J 2012. Phylogeny and classification of whirligig beetles (Coleoptera: Gyrinidae): relaxed-clock model outperforms parsimony and time-free Bayesian analyses. *Systematic Entomology* **37** 706-746.

Latissimus 34 12 SHORT A E Z & FIKÁČEK M 2013. Molecular phylogeny, evolution and classification of the Hydrophilidae (Coleoptera). *Systematic Entomology* **38** 723-752.

Latissimus 34 22 MINOSHIMA Y, HAYASHI M, KOBAYASHI N & YOSHITOMI H 2013. Larval morphology and phylogenetic position of *Horelophopsis hansenii* Satô et Yoshitomi (Coleoptera, Hydrophilidae, Horelophopsinae). *Systematic Entomology* **38** 708-722.

Latissimus 36 27 BILTON D T, TOUSSAINT E F A, TURNER C R & BALKE M 2015. *Capelatus prykei* gen. et sp. n. (Coleoptera: Dytiscidae: Copelatinae) – a phylogenetically isolated diving beetle from the Western Cape of South Africa. *Systematic Entomology* **40** 520-531.

Latissimus 38 10 TOUSSAINT E F A, HENDRICH L, ESCALONA H E, PORCH N & BALKE M 2016. Evolutionary history of a secondary terrestrial Australian diving beetle (Coleoptera, Dytiscidae) reveals a lineage of high morphological and ecological plasticity. *Systematic Entomology* **41** 650-657.

Latissimus 39 7 TOUSSAINT, E F A, SEIDEL M, ARRIAGA-VARELA E, HÁJEK J, KRÁL D, SEKERKA L, SHORT A E Z & FIKÁČEK M 2017. The peril of dating beetles. *Systematic Entomology* **42** 1-10.

Latissimus 40 22 (erroneously reported there as vol. 47) SHORT A E Z, COLE J & TOUSSAINT E F A. 2017. Phylogeny, classification and evolution of the water scavenger beetle tribe Hydrobiusini inferred from morphology and molecules (Coleoptera: Hydrophilidae: Hydrophilinae). *Systematic Entomology* **42** 677-691.

Latissimus 40 24 BACA S M, ALEXANDER A, GUSTAFSON G T & SHORT A E Z 2017. Ultraconserved elements show utility in phylogenetic inference of Adephaga (Coleoptera) and suggest paraphyly of 'Hydradephaga'. *Systematic Entomology* **42** 786-795.

ROAD RUNOFF PONDS – THE BIGGER THE BETTER

Twelve sedimentation ponds around Oslo were studied for what affected the aquatic fauna (91 macroinvertebrates, one cladoceran, one copepod and three amphibians). Pond size was the most important variable, the larger ponds supporting a greater diversity of habitats. Next came AADT (annual average daily traffic) – a positive correlation for which an explanation is not obvious, possibly to do with the largest ponds being where there was most traffic. After that came connectivity, based on distance to the nearest neighbouring pond, emphasising the value of pondscape. The occurrence of most taxa was negatively correlated with metals and with chloride, the latter of course being high in a cold area where road salt has to be used in winter. The only water beetles specifically mentioned in the text were the near threatened *Brychius elevatus* (Panzer), *Hygrotus confluens* (Fab.), *Ilybius guttiger* (Gyllenhal) and *I. quadriguttatus* (Lacordaire), and the IUCN vulnerable *Plateumaris braccata* (Scopoli). The labels on the Redundancy Analysis sun-dials might indicate that *Ilybius ater* (De Geer) and *I. fuliginosus* (Fab.) like to see cars passing by.

SUN Z, BRITAIN J E, SOKOLOVA E, THYGESEN H, SALTVEIT S J, RAUCH S & MELAND S 2017. Aquatic biodiversity in sedimentation ponds receiving road runoff – What are the key drivers? *Science of the Total Environment* **610-611** 1527-1535.

AMAZON STREAM ANALYSIS

This paper compares various indices for use as biological indicators in 51 stream sites in the state of Pará. As might be expected things like family and order groups were correlated in that they responded in similar ways to environmental conditions such as water quality, channel form, substratum and vegetation cover. Beetles do not get much of a look-in. Pity – conservation ultimately has to be about individual species, and some groups have more of them than others.

BRITO J G, MARTINS R T, OLIVEIRA V C, HAMADA N, NESSIMIAN J L, HUGHES R M, FERRAZ S F B & de PAULA F R 2017. Biological indicators of diversity in tropical streams: congruence in the similarity of invertebrate assemblages. *Ecological Indicators* **85** 85-92.

ICWS IN IRELAND

A paper received four years after publication tends not to get reviewed, but editorial privilege allows an exception for this one, which had escaped attention despite authorship. ICWs are Integrated Constructed Wetlands, usually intended to treat waste water, and planted with beds of emergent vegetation, usually common reed (*Phragmites australis* (Cav.)). These systems can be no more unpleasant to work than eutrophic ponds, and they can support a diverse fauna, particularly beetles. This study mainly concerned the 25 km² catchment of the Annestown River in County Wexford. About three-quarters of the farmyard water are treated in a series of interconnected ponds. Sixty-seven species of water beetle were found in 15 ICWs there. A wider survey extended the list to 82 species. Interesting species found at Annestown included *Liopteris haemorrhoidalis* (Fab.), *Rhantus frontalis* (Marsham), *Dytiscus circumflexus* Fab., *Helophorus strigifrons* Thomson, and even two elmids, *Elmis aenea* (Müller) and *Esolus parallelepipedus* (Müller).

BECERRA-JURADO G, FOSTER G, HARRINGTON R & KELLY-QUIN M 2014. Integrated constructed wetlands: hotspots for freshwater coleopteran diversity in the landscape of Ireland. *Biology & Environment Proceedings of the Royal Irish Academy* **114** 1-9.

WORCESTERSHIRE RECORDS

Kyre Park is described on the web as “romantic parkland laid out in 1754” in England. Twenty-five species of water beetle were found in 2017, along with 15 water bugs, ten molluscs, nine odonates and some miscellanea.

WATSON W R C 2017. Aquatic surveys Kyre Park, Worcestershire, June 2017. *Worcestershire Record* **43** 52-56.

CZECH RED LIST

The beetles in this massive Red List benefit, if that is the word, from an up-to-date checklist and numerous expert contributors. The whole list can be cited as Radek Hejda *et al.*, but it may be preferable to seek out the authors of the individual sections, mainly based on families. All the usual suspects, of course, but quite a few surprises (the beetles, not the authors).

Regionally extinct – *Aulonogyrus concinnus* (Klug), *Gyrinus minutus* Fab., *G. natator* (L.), *G. urinator* Illiger, *Haliplus varius* Nicolai, *Hygrobia hermanni* (Fab.), *Dytiscus latissimus* L., *Eretes griseus* (Fab.), *Hydaticus grammicus* (Germar), *Bidessus minutissimus* (Germar), *Hyphydrus aubei* Ganglbauer, *Helophorus confrater* Kuwert, *Georissus laesicollis* Germar, *G. substriatus* Heer, *Helophorus discrepans* Rey, *H. glacialis* Villa & Villa, *H. micans* Faldermann, *H. nivalis* Giraud, *Berosus hispanicus* Küster, *Laccobius albescens* Rottenberg, *L. albipes* Kuwert, *L. colon* (Stephens), *L. neapolitanus* Rottenberg, *L. syriacus* Guillebeau, *Paracymus aeneus* (Germar), *Dryops nitidulus* (Heer), *Limnebius nitidus* (Marsham), *L. stagnalis* Guillebeau, *Ochthebius crenulatus* Mulsant & Rey, *O. exsculptus* Germar, *O. foveolatus* Germar, *O. hungaricus* Endrödy-Younga, *O. marinus* (Paykull), *O. sidanus* d'Orchymont, *Augyles crinitus* (Kiesenwetter), *A. flavidus* (Rossi), *Heterocerus flexuosus* Stephens, *H. parallelus* Gebler, *Donacia reticulata* Gyllenhal, *D. springeri* Müller, *Bagous brevis* Gyllenhal, *B. binodulus* (Herbst)

Critically endangered – *Gyrinus colymbus* Erichson, *G. suffriani* Scriba, *Brychius elevatus* (Panzer), *Haliplus fulvicollis* Erichson, *H. maculatus* Motschulsky, *H. variegatus* Sturm, *Agabus fuscipennis* (Paykull), *Dytiscus semisulcatus* (Müller), *Cybister lateralimarginalis* (De Geer), *Nebrioporus assimilis* (Paykull), *Oreodytes davisii* (Curtis), *Porhydrus obliquesignatus* (Bielz), *Laccornis oblongus* (Stephens), *Bidessus delicatulus* (Schaum), *Helophorus brevitaris* Kuwert, *H. tuberculatus* Gyllenhal, *H. villosus* Duftschmid, *Hydrochus flavipennis* Küster, *Laccobius alternus* Motschulsky, *L. atratus*

Rottenberg, *L. simulatrix* (d'Orchymont), *L. ytenensis* Sharp, *Enochrus hamifer* Ganglbauer, *Cercyon alpinus* Vogt, *C. bononiensis* Chiesa, *C. granarius* Erichson, *Hydraena egoni* Jäch, *H. lapidicola* Kiesenwetter, *H. reyi* Kuwert, *H. rufipes* Curtis, *Ochthebius alpinus* (Ienișteea), *Ochthebius lividipennis* Peyron, *O. meridionalis* Rey, *O. pelsonis* Ganglbauer, *Dryops anglicanus* Edwards, *D. lutulentus* (Erichson), *D. rufipes* (Krynicky), *D. striatopunctatus* (Heer), *Pomatinus substriatus* (Müller), *Augyles hispidulus* (Kiesenwetter), *Heterocerus fossor* Kiesenwetter, *Limnichus incanus* Kiesenwetter, *Donacia brevitarsis* Thomson, *D. malinovskiyi* Ahrens, *D. sparganii* Ahrens, *D. tomentosa* Ahrens, *Macroplea appendiculata* (Panzer), *Bagous czwalinai* Seidlitz, *B. majzlani* (Kodada et al.), *B. petro* (Herbst), *B. rotundicollis* Boheman, *B. validus* Rosenhauer.

Endangered – *Gyrinus paykulli* Ochs, *Halipilus confinis* Stephens, *H. furcatus* Seidlitz, *Ilybius wasastjernae* (Sahlberg), *Colymbetes striatus* (L.), *Graphoderus bilineatus* (De Geer), *Hydroporus elongatulus* Sturm, *H. scalesianus* Stephens, *Chaetarthria simillima* Vorst & Cuppen, *Oreodytes septentrionalis* (Gyllenhal), *Helophorus liguricus* Angus, *Georissus crenulatus* (Rossi), *Berosus geminus* Reiche & Saulcy, *Hydraena pulchella* Germar, *Ochthebius bicolon* Germar, *O. gibbosus* Germar, *O. melanescens* Dalla Torre, *O. metallescens* Rosenhauer, *Dryops griseus* (Erichson), *D. similaris* Bollow, *D. viennensis* (Laporte), *Limnichus pygmaeus* (Sturm), *L. sericeus* (Duftschmid), *Pelochares versicolor* (Waltl), *Contacyphon kongsbergensis* Munster, *Hydrocyphon deflexicollis* Müller, *Donacia brevicornis* Ahrens; *D. impressa* Paykull, *D. obscura* Gyllenhal, *Plateumaris bradata* (Scopoli), *Bagous argillaceus* Gyllenhal, *B. diglyptus* Boheman, *B. frit* (Herbst), *B. glabrirostris* (Herbst), *B. lutosus* (Gyllenhal), *B. lutulosus* Gyllenhal, *B. nodulosus* Gyllenhal, *B. puncticollis* Boheman.

Vulnerable – *Gyrinus distinctus* Aubé, *Halipilus fulvus* (Fab.), *Agabus didymus* (Olivier), *A. striolatus* (Gyllenhal), *Rhantus latitans* Sharp, *R. suturellus* (Harris), *Hydaticus aruspex* Clark, *Hydroporus dorsalis* (Fab.), *H. pubescens* (Fab.), *H. rufifrons* (Müller), *Deronectes latus* (Stephens), *Bidessus grossepunctatus* Vorbringer, *B. nasutus* Sharp, *B. unistriatus* (Goeze), *Hydrovatus cuspidatus* (Kunze), *Helophorus croaticus* Kuwert, *H. redtenbacheri* Kuwert, *Hydrochus brevis* (Herbst), *Anacaena bipustulata* (Marsham), *Helochares lividus* (Forster), *Hydrophilus aterrimus* (Eschscholtz), *H. piceus* (L.), *Cryptopleurum crenatum* (Panzer), *Hydraena morio* Kiesenwetter, *H. paganettii* Ganglbauer, *H. testacea* Curtis, *Ochthebius bernhardi* Jäch & Delgado, *O. flavipes* Dalla Torre, *Augyles sericans* (Kiesenwetter), *Heterocerus obsoletus* Curtis, *Contacyphon punctipennis* Sharp, *Prionocyphon serricornis* Müller, *Scirtes orbicularis* (Panzer), *Donacia crassipes* Fab., *D. dentata* Hoppe, *Bagous bagdatensis* Pic, *B. collignensis* (Herbst), *B. robustus* Brisout de Barneville.

Near Threatened – *Ilybius aenescens* Thomson, *I. crassus* Thomson, *I. neglectus* (Erichson), *I. subtilis* (Erichson), *Graphoderus zonatus* (Hoppe), *Hydaticus continentalis* Balfour-Browne, *Hydroporus fuscipennis* Schaum, *H. kraatzi* Schaum, *H. longicornis* Sharp, *Graptodytes bilineatus* (Sturm), *G. granularis* (L.), *Hygrotus nigrolineatus* (Steven), *H. parallelogrammus* (Ahrens), *Laccophilus poecilus* Klug, *Helophorus arvernensis* Mulsant, *H. asperatus* Rey, *H. strigifrons* Thomson, *Hydrochus ignicollis* Motschulsky, *H. megaphallus* van Berge Henegouwen, *Laccobius gracilis* Motschulsky, *L. obscuratus* Rottenberg, *Berosus frontifoveatus* Kuwert, *Crenitis punctatostriata* (Letzner), *Limnoxenus niger* (Zschach), *Cercyon nigriceps* (Marsham), *Hydraena belgica* d'Orchymont, *H. minutissima* Stephens, *H. schuleri* Ganglbauer, *Augyles pruinosus* (Kiesenwetter), *Bagous longitarsis* Thomson, *B. lutulentus* (Gyllenhal), *B. tempestivus* (Herbst).

Data-deficient – *Agabus lotti* Turner et al., *Rhantus notaticollis* (Aubé), *Hydroporus dobrogeanus* Ienișteea, *H. sabaudus* Fauvel, *Stictotarsus duodecimpustulatus* (Fab.), *Aulacochthebius narentinus* Reitter, *Hydraena subimpressa* Rey, *H. subjuncta*

d'Orchymont, *Limnebius furcatus* Baudi, *Ochthebius colveranus* Ferro, *Elodes elongata* Tournier, *E. johni* Klausnitzer, *E. pseudominuta* Klausnitzer, *E. tricuspis* Nyholm, *Odeles gredleri* (Kiesenwetter), *O. hausmanni* (Gredler), *Scirtes flavicollis* (Kiesenwetter), *Bagous limosus* (Gyllenhal).

HEJDA R, FARKAČ J & CHOBOT K (eds) 2017. Červený Seznam Ohrožených Druhů České Republiky. Bezobratlí [Red List of Threatened Species of the Czech Republic. Invertebrates]. *Příroda*, Číslo **36**.

LEBANESE WATER BEETLE RECORDS

Eighty-nine species are recorded from Lebanon. This review includes much new survey work and records 27 species not previously known, such as *Haliplus heydeni* Wehncke, *H. maculatus* Motschulsky, *Agabus caraboides* Sharp, *A. glacialis* Hochhuth, *Hydroporus humilis* Klug, *H. kozlovskii* Zaitzev, *Nebrioporus airumlus* (Kolenati), *Helophorus terminissinae* Angus, *Hydrochara dichroma* (Fairmaire), and *Coelostoma syriacum* d'Orchymont.

DIA A 2014. Diversité des Coléoptères des rivières du Liban: familles des Gyrinidae, Haliplidae, Noteridae, Dytiscidae, Hydrophilidae, Sphaeridiidae, Helophoridae, Hydrochidae et Dryopidae (Coleoptera). *Bulletin de la Société d'histoire naturelle de Toulouse* **150** 73-83.

SOUTH AFRICAN CRENITIS

The twelve African species are keyed, including the three new ones. These *Laccobius*-like species all seem to live in seepage over wet rock. *C. quagga* is named after the extinct zebra, *Equus quagga* (Boddaert), both being partly striped.

BILTON D T 2017. Three new species of *Crenitis* Bedel, 1881 from South Africa, with a revised key to African species (Coleoptera: Hydrophilidae). *Aquatic Insects* **38** 101-113.

MOUNTAIN SUCTORIANS

At last we might have a champion for all those ciliates who is actually a water beetle! Anyone who has tried to study these animals will immediately find difficulties in knowing how to tackle them, even when they get help from a protistan expert. In this survey two suctorian ciliate species, *Tokophyra* cf. *stenostyla* Hamilton & Jahn and the newly described *Discophyra ordesae* Fernández-Leborans & Valladolid [thank goodness these authors are specified – eight authors would be too much!], were found attached to several *Hydraena* species in the Pyrenees. No suctorians were found on three *Hydraena* species in the Arazas River, the *Tokophyra* was found twice on *H. truncata* Rey in the Bellós River, but three *Hydraena* species were found to be infested in the Yaga river, one specimen of *H. delia* Balfour-Browne and one of *H. truncata* having both suctorian species. The *stenostyla* records are rendered a little doubtful by differences in the collar at the junction of the main body and the stalk: also, this is the first record of this taxon from arthropods, earlier ones being from turtles in Tennessee, algae in the Danube and on the hydrocaulus of the hydrozoan *Cordylophora caspia* (Pallas).

This paper would provide a good starting point for anyone wishing to study suctorians in that the descriptions are exemplary and there is a useful literature review. María Valladolid is the author for correspondence.

FERNÁNDEZ-LEBORANS G, VALLADOLID M, ARAUZO M, MILLÁN A, GABILONDO R, GALLARDO M, JIMÉNEZ L & RAMÍREZ-BALLESTEROS M 2017. Epibionts on *Hydraena* species (Coleoptera: Hydraenidae) from high mountain rivers of Pyrenees (Ordesa and Monte Perdido National Park), with the description of a new species. *Zootaxa* **4317** 79-94.

HAWAIIAN HYDROPHILIDAE

Michael Hansen (1995. A review of the Hawaiian Hydrophilidae (Coleoptera). *Pacific Science* **49** 266-288) noted that there were only 21 species, of Hydrophilidae known from Hawaii, most of them being accidental introductions. He also regarded the two species of *Limnoxenus*, *nesiticus* (Sharp) and *semicylindicus* (Eschscholtz), as being special, the former known only the type series and the second now in decline and restricted to higher elevations than before. The importance of this upland survival was established by Andrew Short and James Liebherr (2007. Systematics and biology of the endemic water scavenger beetles of Hawaii (Coleoptera: Hydrophilidae, Hydrophilini). *Systematic Entomology* **32**: 601-624) when they found five new species of *Limnoxenus* on Hawaii. This endemism is well and truly established here in this molecular analysis of the evolution of Hydrobiusini. The origin of the tribe can be wound back to ca 100 million years ago in the middle of the Cretaceous in Laurasia followed by colonisation of Australia. However, the fossil record can be interpreted as supporting origin in Gondwana, and both possibilities are displayed diagrammatically. Remarkably the history of *Limnoxenus* on Hawaii began before the current islands had been formed, about 30 million years ago. This is much earlier than other endemic species. Overall, these radiations must have been marked by many long-distance dispersals over oceans, also almost certainly involving Antarctica.

TOUSSAINT E F A & SHORT A E Z 2017. Biogeographic mirages? Molecular evidence for dispersal-driven evolution in Hydrobiusini water scavenger beetles *Systematic Entomology* doi:10.1111/syen.12237 10 pp.

HYGROTINI CHANGES

There were several unexpected consequences to the transfer of *Herophydrus* to *Hygrotus* by Villastrigo *et al.* (2017) – see **Latissimus** **40** 20. For example, *Herophydrus nigrescens* Biström & Nilsson became a junior secondary homonym of *Hygrotus* (*Leptolambus*) *nigrescens* (Fall), necessitating a replacement name, in this case *Hygrotus* (*Hygrotus*) *bistromi* Fery. Similar problems beset *Herophydrus reticulatus* Pederzani & Rocchi, *H. vittatus* Régimbart, and other nasty problems are resolved concerning *Hyphophorus elevatus* Sharp and *Herophydrus quadrilineatus* Régimbart.

FERY H 2017. Substitution of some species-level names in the tribe Hygrotini Portevin, 1929 (Coleoptera: Dytiscidae: Hydroporinae). *Zootaxa* **4341** 425-427.

POLISH LACCOBIUS

New records are given for nine species of *Laccobius* in Poland. These include *L. albipes* Kuwert, *L. alternus* Motschulsky, *L. gracilis* Motschulsky, *L. obscuratus* Rottenberg and *L. simulatrix* d'Orchymont. Some good habitats for *Laccobius* are illustrated in the Białka valley.

GREŃ C, PRZEWOŹNY M & MILKOWSKI M 2017. Nowe stanowiska gatunków z rodzaju *Laccobius* Erichson, 1837 (Coleoptera: Hydrophilidae). *Acta entomologica silesiana* **25** (035) 1-11. [in Polish]

BEREZINA CATALOGUE

The insects of UNESCO Biosphere Reserve of Berezina are catalogued here. This area of taiga is 100 km north-east of Minsk in Belarus. The word Bérézina is used in France for a disaster, based on Napoleon's crossing of the river in 1812, and other visitors have not fared much better! However, a visiting water beetle would find much of interest.

RYNDEVICH S K & MOROZ M 2016. pp. 66, 85-100, 102. 128-129 in: A.O. Lukashuk, V.A. Tsinkevich (eds). Biological diversity of the Berezina Biosphere Reserve: Springtails (Collembola) and insects (Insecta). *Belaruskiy Dom pečati*. Minsk [in Russian]

BOLSHEZEMELSKAYA TUNDRA

Only 42 species but what an exciting area! These coastal saltmarshes, known regionally as laida, look north to Novaya Zemlya. The beetles divide into assemblages of weakly brackish lake marshes and of the bedrock. They include *Oreodytes alpinus* (Paykull), *Hydroporus acutangulus* (Thomson), *H. brevis* (Sahlberg), *H. figuratus* (Gyllenhal), *H. punctipennis* (Sahlberg), *Agabus adpressus* Aubé, *A. coxalis ermaki* (Zaitzev), *A. luteaster* (Zaitzev), *A. moestus* (Curtis), *A. pallens* Poppius, *A. thomsoni* (Sahlberg), *A. zetterstedti* Thomson, *Helophorus strandi* Angus, and *Ochthebius kaninensis* Poppius. Illustrations are provided for *A. luteaster* and *O. kaninensis*. *A. luteaster* was previously known only from the Polar Urals and the Siberian Arctic. Pitfall traps proved important, not only for *Helophorus obscurellus* Poppius and other *Helophorus*, but also for some Dytiscidae, in particular *Ilybius angustior* (Gyllenhal), and for *O. kaninensis*, of which only two specimens were caught in Khaypudyskaya Bay.

PROKIN A A, MAKAROVA O L & PETROV P N 2017. Water beetles (Coleoptera) of coastal areas of the Bolshezemelskaya Tundra, extreme northeastern Europe. *Aquatic Insects* doi.org/10.1080/01650424.2017.1387270 22 pp.

CHUVASH REPUBLIC DATA

Seventy-five beetle species recorded as new for the Chuvash area include the following: *Halipilus furcatus* Seidlitz, *Bidessus nasutus* Sharp, *Hydroporus scalesianus* Stephens, *Cercyon ustulatus* (Preysslér), and *Chaetarthria seminulum* (Herbst).

EGOROV L V 2017. Some data concerning the Coleoptera fauna of the nature reserve "Prisursky". Information 6. *Scientific Proceedings of the State Nature Reserve "Prisursky"*, Cheboksary **32** 104-141. [Russian only]

AMBER LIMNICHID

The second limnichid to be described from Baltic amber is shown in fine detail. It is named *electricus* based on the Latin for amber, *electrum*. The specimen is now in the Museum of Amber Inclusions at the University of Gdańsk.

HERNANDO C, SZAWARYN K & RIBERA I 2018. A new species of *Platypelochares* from Baltic amber (Coleoptera: Limnichidae). *Acta entomologica musei nationalis Pragae* **58** 17-20.

HYGROTUS NIGROLINEATUS IN POLAND

H. nigrolineatus is recorded from the Masurian Lakes District.

KOT H 2017. *Hygrotus (Coelambus) nigrolineatus* (Steven, 1808) (Coleoptera: Dytiscidae) – kolejne stanowisko rzadkiego pływaka w Polsce. *Wiadomości Entomologiczne* **36** 176-177. [in Polish]

ROCKPOOL ORIGINS

The groups of *Ochthebius* live in marine rockpools. The putative subgenus *Calobius* has several species such as *O. quadricollis* Mulsant, as does the former subgenus *Cobalius*, with species such as *subinteger* Mulsant & Rey. There are also members of the *alpicola* group in South Africa. Genetic analysis demonstrates that these groups are not directly related and that invasion of hypersaline rockpools must have occurred at least three times. The analysis further indicates that *Cobalius* is an effective subgenus whereas *Calobius* is best considered as a lineage of *Ochthebius* sensu lato. Further, it is necessary to re-evaluate the taxonomy of *Cobalius* with several new species to be recognised.

SABATELLI S, AUDISIO P, ANTONINI G, SOLANO E, MARTINOLI A & TRIZZINO M 2016. Molecular ecology and phylogenetics of the water beetle genus *Ochthebius* revealed multiple independent shifts to marine rockpools lifestyle. *Zoologica Scripta* **45** 175-186.

NEW *PLATYNECTES* OR OLD *LACCONNECTUS*?

Platynectes sahyadriensis is described from rubber plantations in the Kottayam and Pathanamthitta Districts of Kerala. It was found to feed on larval *Aedes albicinctus* (Skuse) in temporary pockets of water such as the cups used to collect the rubber latex. Identification as a *Platynectes* is attributed to the Natural History Museum, London but here it seems that the wrong message was conveyed from a visitor to the Museum who had originally identified it only as a copelatine. Lars Hendrich thinks it is a *Lacconnectus*. The photograph of a live adult (left) is not very helpful but it should be possible to give it a name based on the photograph of the median lobe (right).



BASHIR A, KUMAR NP & KHAN A B 2018. Description of a new species, *Platynectes sahyadriensis* (Coleoptera: Dytiscidae), predatory to *Aedes albicinctus* (Diptera: Culicidae) from the foothills of Western Ghats, Kerala, India. *Biomedical, Journal of Scientific & Technical Research* **2** (3) DOI: 10.26717/BJST.2018.02.000767 pp. 7.

BERNOUILLI EFFECT

Dr Hans Fery makes the following comment, following misrepresentation of the Effect in **Latissimus 40**. He also advises watching <https://www.youtube.com/watch?v=1JuoSJz3SRU>

If a beetle (without ridges on the elytra) is swimming in a stream between gravels and its upper surface (mainly the elytra) comes close to the surface of a gravel (both surfaces more or less parallel), then the flow of water between both surfaces is increased and the pressure between these surfaces is reduced (but the pressure onto the ventral surface is more or less unchanged or even increased!). Thus, the beetle is moved (pressed) with its upper surface closer to the gravel by the higher pressure onto the ventral surface, the upper surface comes still closer to the surface of the gravel, the pressure between the beetle and the gravel is still more reduced etc. etc. and finally the beetle is totally fixed to the gravel with its upper surface and cannot swim/manoeuvre any more.

If the elytra have ridges, the flow of water between the elytral surface and the gravel's surface cannot increase so strongly and the pressure cannot be totally reduced and thus the beetle is not so strongly pressed to the gravel.

GABON

The survey of the Birougou Mountains in 2016 proved particularly productive, with 4 Noteridae and 63 Dytiscidae found of which six are new to science – *Canthydrus lepidus*, *Hyphydrus simulans*, *Liodessus contractipennis*, *Copelatus apicinotatus*, *C. birougouensis*, and *Hydaticus lepemangoyei* [on the cover of this issue].

BILARDO A & ROCCHI S 2018. Noteridae, Dytiscidae (Coleoptera) du Gabon (11ème partie). Parc National Monts Birigou (mission 2016). *Atti della Società italiana di scienze naturali e del Museo civico di storia naturale di Milano* **5** 33-51.

POTAMOPHILUS IN LITHUANIA

This species was first recorded in the Jūra River. The new record is from the Minija River.

VIŠINSKIENĖ G, ARBAČIAUSKAS K & ŠIDAGYTĖ E 2017. New locality of the rare riffle beetle, *Potamophilus acuminatus* (Fabricius, 1772) (Coleoptera, Elmidae) in Lithuania. *Bulletin of the Lithuanian Entomological Society* 1 (29) 30-34.

POMATINUS IN POLAND

P. substriatus is recorded from the Świętokrzyskie Mountains in 2015.

LUBECKI K 2017. *Pomatinus substriatus* (Ph. Müller, 1806) (Coleoptera: Dryopidae) nowy dla Gór Świętokrzyskich. *Wiadomości Entomologiczne* 36 177-178. [in Polish]

EUROPEAN DRYOPS

Jonas Köhler has drawn attention to Arved Lompe's work on *Dryops*, currently available at <http://www.coleo-net.de/coleo/texte/dryops.htm>

ARCTIC CIRCLE 2019

Plans are surprisingly well advanced for a visit to Arctic Sweden in June 2019. There is always an element of risk choosing dates there, too early and we are ice-bound, too late and we are drained of blood by mosquitoes. It will be expensive too, and take longer than the usual weekend. The Arctic Hydradephaga fauna is highly diverse and well worth the effort.

**Ireland 8-11 June 2018**

All the accommodation is now fully booked with about 25 participants.

Latissimus is the newsletter of the Balfour~Browne Club.

***Latissimus* 41** was produced as a PDF in May 2018

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